



SOIL ATLAS

KARUR DISTRICT



SOIL SURVEY & LAND USE ORGANISATION
(DEPARTMENT OF AGRICULTURE TAMIL NADU)

THANJAVUR 613 001

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வீரபாண்டி எஸ். ஆறுமுகம்
வேளாண்மைத் துறை அமைச்சர்



தலைமைச் செயலகம்
சென்னை 600 009

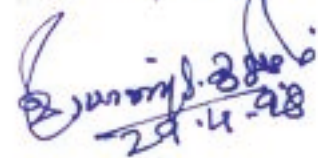
அணிந்துரை

தமிழ்நாடு வேளாண்மைத் துறையில் உள்ள வேதியியல் பிரிவு தமிழக வேளாண் பெருங்குடி மண்ணின் தேவையை அறிந்து மண்வள தொகுப்பேடு ஒன்று தயாரித்து இருப்பது பாராட்டுக்குரிய செயலாகும்.

வேளாண்மைக்கு அடித்தளமாய் அமைவது நிலமும், நீரும் ஆகும். மண்ணின் வகைகளை அறிந்து அதன் வளத்தை தெரிந்து கொண்டு, அதற்கேற்ற பயிர் வகைகளை பயிர் செய்வதால் உற்பத்தி திறன் அதிகரிப்பதோடு, மண் வளமும் பாதுகாக்கப்படுகிறது. சங்க காலத்தில் மண்வளத்தை அறிந்து கொள்ள குறிஞ்சி, முல்லை, மருதம், நெய்தல் என நம் முன்னோர்களால் நிலப் பாகுபாடுகளை அறிந்து வைத்திருந்தார்கள். பிற்காலங்களில் மண்ணை, செம்மண் என்றும், கரிசல் மண் என்றும், வண்டல் மண் என்றும், மணற்பாங்கான மண் என்றும், மண்ணின் தன்மைக்கு ஏற்ப பிரித்து வைத்திருந்தார்கள். பண்டைய காலங்களில் மண் பாகுபாடு செய்வது தேவையற்ற ஒன்றாக கருதப்பட்டாலும், இன்றைய சூழ்நிலைக்கு மண் பாகுபாடு மிகவும் அவசியமாகிறது. வளர்ந்து வரும் மக்கள் தொகைக்கு ஏற்ப உணவு உற்பத்தியை பெருக்க மண் வரை தொகுப்பு வேளாண்மை ஆராய்ச்சியாளர்களுக்கும், விரிவாக்க அலுவலர்களுக்கும் மிகவும் பயன் உள்ளதாக இருக்கும் என நம்புகிறேன்.

இத்தொகுப்பினை வெளியிட ஈடுபட்ட அனைத்து அலுவலர்களுக்கும் எனது பாராட்டுக்களையும், வாழ்த்துக்களையும் தெரிவித்துக் கொள்கிறேன்.

அன்புடன்,


29.4.98

டி. ஆதிமுனம், இ.ஆ.ப.
அரசு செயலர்



வேளாண்மைத் துறை
சென்னை 600 009

அணிந்துரை

மண்வளமும் மனித வளமும் ஒரு நாட்டிற்கு இன்றியமையாதன ஆகும். இன்னும் சொல்லப்போனால் நிலத்து மண் ஆனது மனிதச்சரிதையின் பிரதிபலிப்பு ஆகும். ஏனெனில் அதுவே மனித நாகரீகத்தின் மாட்சியையும் வீழ்ச்சியையும் எடுத்துரைப்பதாக இருந்து வந்துள்ளது. இதற்குச் சரித்திரச் சான்றுகளும் பல உண்டு. இப்படித்தான் பெருமை படைத்த மண்வளம் பற்றிய விவரங்களை நெறிப்படுத்தி அண்டியோர்க்குப் பயன் அளிக்கும் வகையில் அமையச் செய்வது காலத்தின் கட்டாயமாகும். அதிலும் குறிப்பாக ஒன்பதாவது ஐந்தாண்டுத் திட்டத்தின் துவக்கத்திலேயே இப்பணி நடைபெறுவது சாலச்சிறந்தது ஆகும். ஏனெனில் இத்திட்டப் பெரு நோக்கங்களில் ஒன்றாக மண்வளம் சார்ந்த இனங்களை அடையாளம் கண்டு செயல்படுவது மிகவும் வலியுறுத்தப்பட்டுள்ளது.

எனவே, மாவட்ட வாரியாக மண்வள ஆதாரங்களைத் தொகுக்கும் முயற்சி மேற்கொள்ளப்பட்டது. இப்பணி நான் வேளாண்மை இயக்குநராகப் பொறுப்பில் இருந்த காலத்தில் முடிக்கப்பட்டது. தமிழ்நாட்டில் அப்போதிருந்த 15 மாவட்டங்களுக்கும் தனித்தனியே மண்வளத் தொகுப்புகள் தயாரிக்கப்பட்டன. ஆயினும் அவை வரைவு நகல்களாகவே இருந்து வந்துள்ளன. அதனால் அதன் பயனை நுகர மிகச் சிலருக்கே வாய்ப்பு கிட்டியது.

இத்தொகுப்பேட்டில் விரலிக்கிடக்கும் விவரங்கள் சீரிய திட்டமிடலுக்கு அடித்தளமாக அமைகின்றன. ஓரிடத்தில் நிலவும் தப்புவெப்ப நிலை, பாசன வளம், பயிர் சாகுபடி விவரங்கள், மண் வகைகள் அவற்றின் விளைதிறன், ஏற்புடைய பயிர்கள் பற்றிய விளக்கங்கள் இடம்பெற்றுள்ளன. ஆக இவற்றின் அடிப்படையில் அமல்படுத்தப்படும் உற்பத்திப் பெருக்குத் திட்டங்கள் அபரிமித வெற்றி அளிப்பதில் ஆச்சரியமில்லை. உதாரணமாக அண்மையில் மணிகண்டம் ஒன்றியத்தில் நிறைவேற்றப்பட்ட வேளாண் வானியியல் வளிமண்டலத் திட்டத்தினைச் சொல்லலாம். இத்திட்டத்தின் முதன்மைச் செயல் அம்சமாக இப்பகுதி நிலங்கள் நெறிப்படுத்தப்பட்டன. இத்தகைய அணுகுமுறையினால் களர்த்தன்மை உடைய இப்பகுதி நிலங்களில் சீர்த்திருத்தம் மேற்கொண்டபின் மகதவானது எக்டேருக்கு 400 கிலோ முதல் 700 கிலோ வரை உயர்ந்துள்ளது என்பது பெருமைக்குரியதாகும்.

மிகக் பயன் அளிக்கவல்ல இத்தொகுப்பேட்டு விவரங்களினை உற்பத்தி முனைவோர் அனைவரும் பெற்றிட இதனை அச்சிடும் பணிக்கு ரூ. 10.5 இலட்சம் அனுமதித்து தமிழ்நாடு அரசு ஆணையிட்டுள்ளது. அதன் தொடர் நிலுவாகவே ஏட்டளவில் இருந்த இத்தொகுப்பேடுகள் வண்ணமிக வடிவுடனும், விவரப்பொலிவுடனும் அச்சேறி தற்போது நற்பயன் அளிக்கும் நிலை பெற்றுள்ளன. வேளாண்மை இயக்குநராக அன்று நான் துவக்கிய பணி, செயலராகப் பொறுப்பேற்றுள்ள இந்நாளில் மலர்ந்து மிளிர்வது குறித்து மட்டற்ற மகிழ்ச்சி அடைகிறேன். அத்துடன் இத்தொகுப்பேட்டுவிவரங்கள் நுண் திட்டமிடல், ஏறுமுக்கு திட்டம் போன்றவற்றிற்கும் ஆதாரமாய் அமைகின்றன. புதிய சாதனைகளைத் தொடுவோரை வள்ளுவர்,

வாரிப்பெருக்கி வளம்கட்டு உற்றவை
ஆராய வான் எனப் பெருமைப்படுத்துவார்.

அவர் கூற்றுப்படி ஆராய முனைவோர்க்கு முன்னோடியாகவும், முதலினைப் பின்புலமாகவும் இத்தொகுப்பேடு அமைந்துள்ளது என்பதில் பெரிதும் மகிழ்வடைகிறேன்.

இத்தொகுப்பேடு நன்கு வடிவமைக்கப்பட்டு, விவரங்கள் பயன்தரும் வகையில் தெளிவுப்படுத்தப்பட்டுள்ளமைக்குப் பொறுப்பான அனைவருக்கும் எனது பாராட்டுதலைத் தெரிவித்துக் கொள்கிறேன்.

சென்னை
17. 4. 1998

17.4.98
அரசு செயலர்
வேளாண்மைத்துறை

டாக்டர். க. அருள்மொழி, இ.ஆ.ய.
வேளாண்மை இயக்குநர்



சேப்பாக்கம்
சென்னை 600 005

அணிந்துரை

நீல மடந்தை நமக்கு அளித்துள்ள இயற்கை வளங்களில் மிக முதன்மையானது மண்வளம் ஆகும். அத்துடன் தமிழர் வாழ்வியலில் மண்ணும் மனிதனும் பின்னிப் பிணைந்தே பேசப்படும். எனவே தான் மண்வகைகளைப் பற்றியும், அவற்றின் சாதக பாதகத் தன்மைகள் பற்றியும் சங்க கால இலக்கியங்கள் விரிவாகவே பேசுகின்றன. பிற்கால அறிவியல் முன்னேற்றம் காரணமாக ஆய்ந்தறிந்து பெறப்பட்ட உண்மைகளும் முந்தையனவைப் பெரிதும் ஒத்து இருந்தமை ஆனது பண்டைத் தமிழரின் அறிவியல் மேன்மையை எடுத்துக் கூறுவதாக அமைந்துள்ளது.

மண்வளங்களைப் பயன்படுத்துவது என்பது சமுதாயக் கட்டாயங்களினால் ஏற்பட்டதாகும். விரிந்து வரும் மக்கள் தொகை பெருகி வரும் உணவுத் தேவைகள் மற்றும் கருங்கி வரும் சாகுபடிப் பரப்பு ஆகியவை இவற்றுள் அடங்கும். இந்த வகையில் பல மண்வகையீடு முயற்சிகள் தேசிய அளவிலும், மாநில அளவிலும் எடுக்கப்பட்டுவந்துள்ளன. அந்நாட்களில் சென்னை இராஜதானியில் நடத்தப்பட்ட மண்வகையீடுமுயற்சி இதன் துவக்கம் எனலாம். இதுவும் பின்னர் நடத்தப்பட்ட திட்டங்களும், குறிப்பிட்ட நோக்கத்திற்காகவே அமல் செய்யப்பட்டன. இதன் உச்சக்கட்டமாக 1960 ம் ஆண்டில் தரமான மண்வகையீட்டுத் திட்டம் ஒன்று மண்வகைகளின் தன்மைகளை விரிவாகவும் விளக்கமாகவும் கூர்ந்தாய்வு செய்திட அறிமுகம் செய்யப்பட்டது.

தமிழ்நாட்டு மண்வள ஆதாரங்களை விளக்கும் வரைபடங்கள் தயாரிக்கும் பணியில் வேளாண் துறையின் வகையீடுஅலகுகள் பணிக்கப்பட்டன. இவைகள் நடத்திய துவக்க மண்வகையீடு மூலம் பெறப்பட்ட மண்வள ஆதார விவரங்கள் மாவட்ட வாரியாகத் தொகுக்கப்பட்டன. இவை மாவட்ட வளர்ச்சிக்கான திட்டமிடலுக்கு உதவுகரமாக அமைந்துள்ளன. எனினும் வெறும் வரைவு ஏடுகளாகவே இருந்து வந்த இத்தொகுப்பேடுகளை அனைவரும் பெற்றிடும் வகையில் அச்சுப் பதித்து வெளியிட தமிழ்நாடு அரசு ரூ. 10.5 இலட்சம் நிதி அனுமதித்துள்ளது. இந்த இனிய துவக்கமாகவே மாவட்ட மண்வளத் தொகுப்பேடுகள் தற்சமயம் வெளியிடப்பட்டுள்ளன. இத்தொகுப்பேடுகளில் உணவு உற்பத்திக்கான ஊக்க முயற்சிகளுக்கு போதுமான நிலம் மற்றும் அதனைச் சார்ந்த அனைத்து விவரங்களும் இடம் பெற்றுள்ளன. நீர்ப்பாசனம், தட்பவெப்பத்தழல், பயிர் வகைகள் விளைதிறன் ஆகிய விவரங்களின் அடிப்படையில் கிராம அளவிலான நுண் திட்டமிடல், ஏறுமுக வளர்ச்சித்திட்டம், பஸ்துறை பங்கேற்புத் திட்டம் போன்ற முயற்சிகள் அமல் செய்யப்படுவதற்கான இடங்களை அடையாளம் காண இத்தொகுப்பேடு பெரிதும் உதவும்.

பெரும்புயன் தரவல்ல இத்தொகுப்பேட்டினை உருவாக்கி, தொகுத்து வடிவமைத்து வெளியிட உதவிய அனைவர்க்கும் எனது பாராட்டுதல்களை மகிழ்ச்சியுடன் தெரிவித்துக் கொள்கிறேன்.

க. அருள்மொழி 30.3.98

KARUR

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ABOUT THE SOIL ATLAS

Agriculture play a vital role in the Indian economy and provides occupation to about 75% of the population which in turn depends on several inputs applied on soil. As such soil forms the basic non renewable natural resource, its health and land productivity on a sustained basis have to be maintained for sound production system. All inputs in the production systems can be functional only when there is soil/land which is qualitatively suitable for such purpose.

In this context, soil survey form the basic tool for agriculturl development programmes and provides information on characteristics and location of the different kinds of soils and their management potentials as well as their limitation for different purposes. Keeping this in view a data base on soils of the district have been developed through reconnaissance soil survey and this is useful for planning at regional level.

In the Atlas, all the information pertinent to the socio economic condition of the district is provided briefly. Soil characteristics and their interpretations are subsequently presented at district level in small scale. For better understanding soil information and their interpretations are also given at taluk level. Further, dominant kind of soil at village level and their fertility status have been provided for developing optimum fertility management programmes.

As soil is highly heterogeneous in nature, differences in soil can occur within short distances and therefore it is needless to say that detailed soil surveys at higher intensity are necessary for micro level development programmes.

LOCATION

KARUR DISTRICT

Karur district is a newly formed district of Tamilnadu, carved out from the erstwhile composite Thiruchirappalli district with the head quarter at Karur. The land scape of this district is mostly undulating plains with less flat lands. Karur district is bounded by Namakkal district is on the North, West by Erode district, East and South-east by Thiruchirappalli and, South by Dindigul district. This district is spread over in four taluks, 8 panchayat unions and 203 revenue villages with an extent of 2895.57 sq.km.

Geocode :

North latitude $10^{\circ}.32'$ to $11^{\circ}.06'$

East longitude $77^{\circ}.45'$ to $78^{\circ} 35'$

Agro Ecological Region :

D 3.4 Semi arid, hot - Tamilnadu upland with a growing period of 90 - 120 days and little to moderate moisture availability

D 4.4 Semi arid, hot-Central Peninsular Plateau with a growing period of 120-150 days and moderate moisture availability.

Agro climatic zone :

The district comes under three major sub-zones namely,

Sub-zone III - Western zone

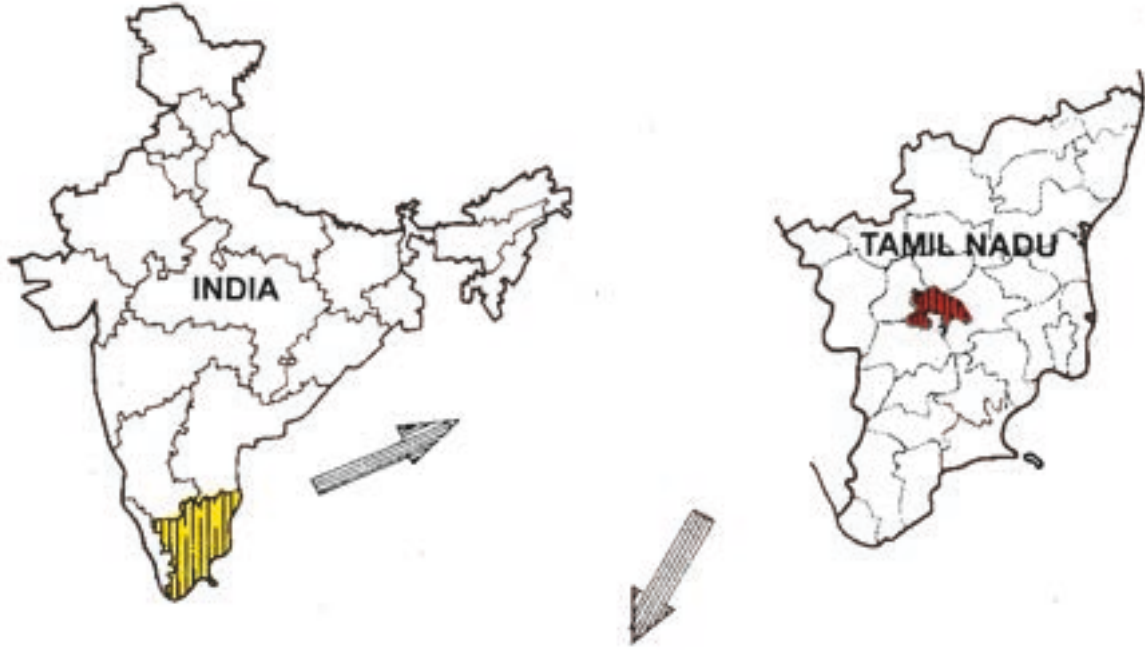
Sub-zone IV - Cauvery Delta zone (small portion)

Sub-zone V - Southern zone

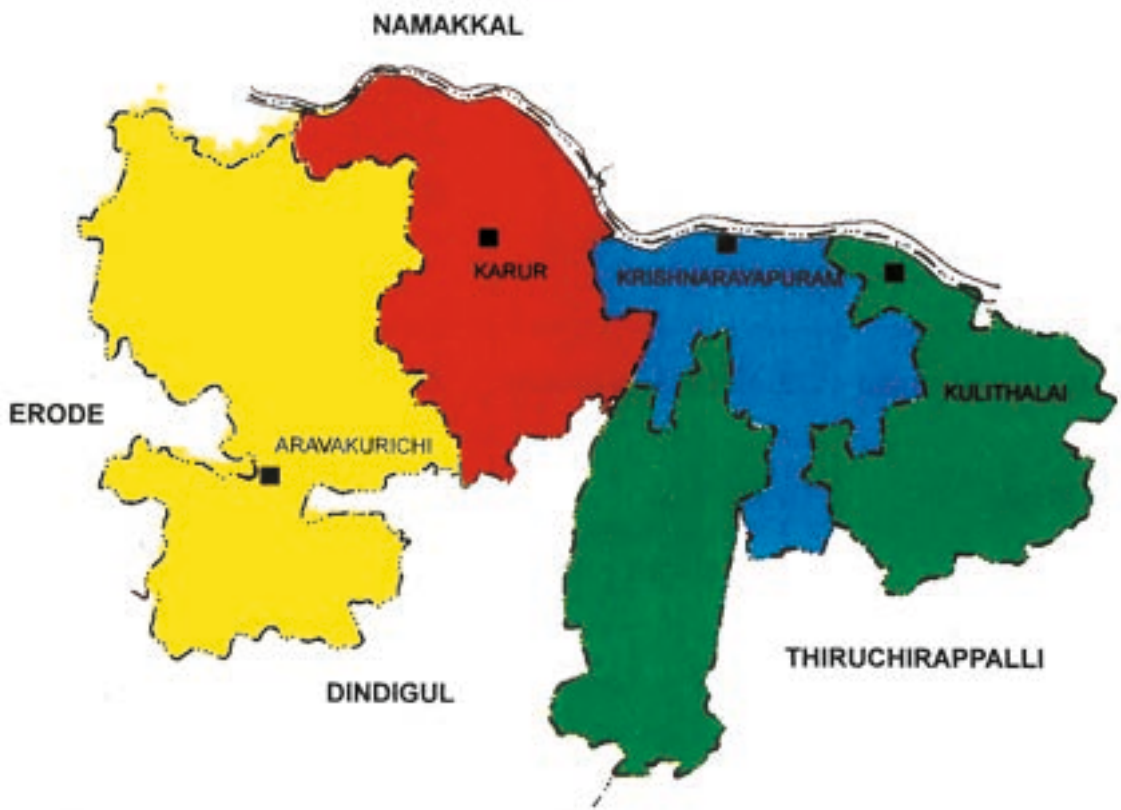


LOCATION MAP

KARUR DISTRICT



KARUR DISTRICT



TALUKS AND PANCHAYAT UNIONS

KARUR DISTRICT

Karur district comprises, four taluks and eight panchayat unions. The details of taluks, panchayat unions and the number of revenue villages are given below.

The four taluks are spread over in 203 revenue villages covering an extent of 2,89,557 hectares of land. Of the four taluks, Karur alone has an extent of 60,643 (20.95%) hectares as against 97,616 (33.71%) hectares in Aravakkurichi taluk.

Sl.No.	Taluks	Panchayat unions	Extent of taluks (ha)	Percent to total	No of revenue villages
1.	Aravakkurichi	1. Aravakkurichi	97,616	33.71	58
2.	Karur	2. Karur 3. K.Paramathi 4. Thanthoni	60,643	20.95	52
3.	Krishnarayapuram	5. Krishnarayapuram	39,503	13.64	28
4.	Kulithalai	6. Kulithalai 7. Thogaimalai 8. Tharagampatti	91,795	31.70	65
Total			2,89,557	100.00	203



TALUKS & PANCHAYAT UNION KARUR DISTRICT



REFERENCE

- District boundary
- Taluk boundary
- Panchayat Union boundary

ROADS AND RAILWAYS

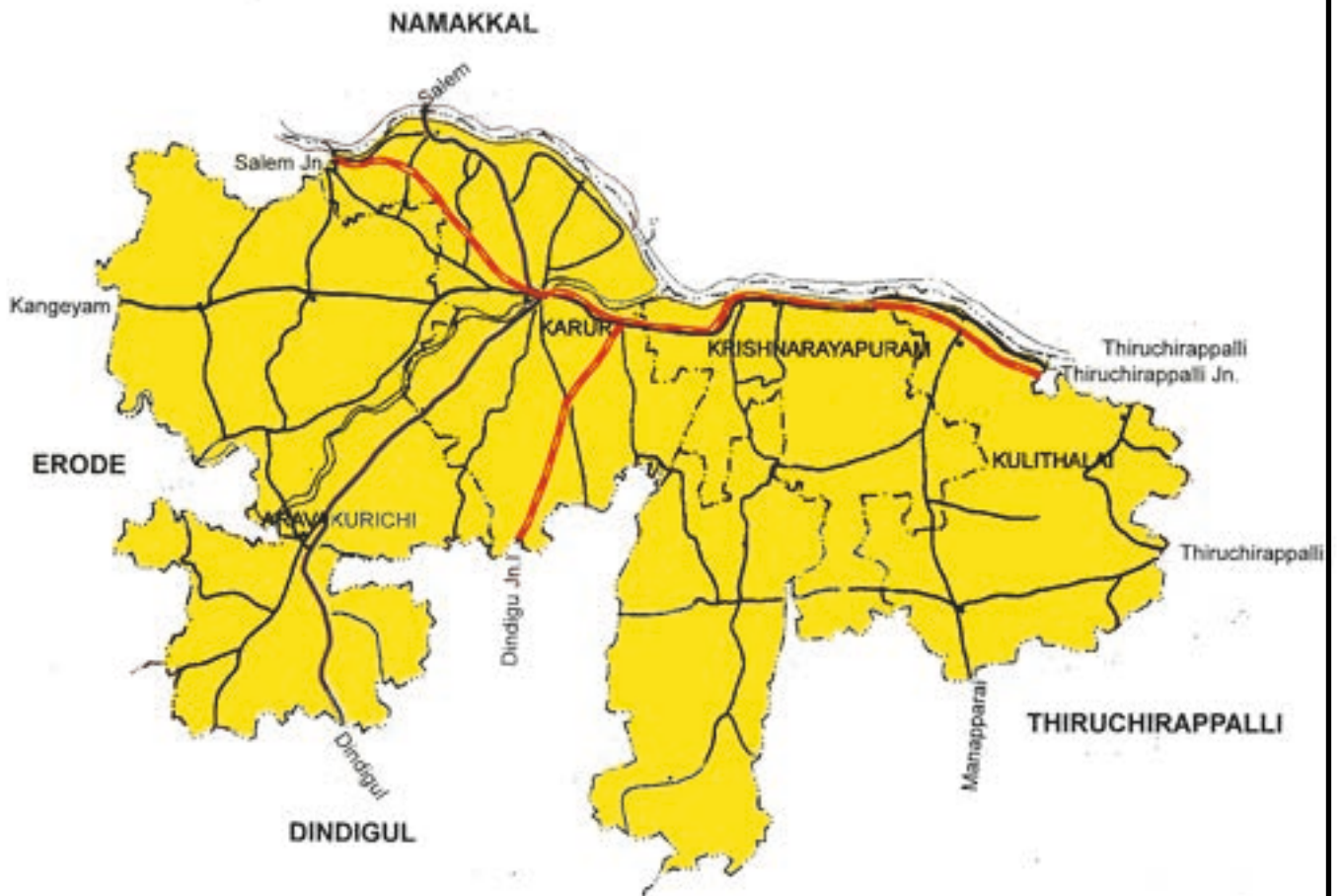
KARUR DISTRICT

This district is well connected with a network of roads and railways. The total road length in the district is 1058 km. The important roads are as follows :

- NATIONAL HIGHWAYS (NH - 7)** : NH 7 Dindigul - Karur - Salem 52.8. km
- STATE HIGHWAYS** : Thiruchirappalli - Karur - Coimbatore
56.814 km
- DISTRICT ROADS** : The major district roads connect the district headquarters Karur with all taluk headquarters. The total length is 885.85 km.
- RAILWAYS** : The district is served by both metre gauge and broad gauge (70 km) railways of Southern Railways. There are 14 railway stations with one junction at Karur.



ROADS & RAILWAYS KARUR DISTRICT



REFERENCE

-  District boundary
-  Taluk boundary
-  State Highways
-  National Highways
-  Railway line
-  Rivers

GEOLOGY

KARUR DISTRICT

Karur district is made up of Archaeans and Quaternary formations. The Archaeans consist of complex, igneous and metamorphic rocks such as quartzites, biotites, hornblende and charnockite. Quaternary beds lie along the borders of Thiruchirappalli district. In this district Feldspathic, pink granites, calcic etc., and layer of river alluvium is also found in this district.

In Krishnarayapuram taluk, quartzite accumulations are seen along with calcid and Feldspathic gneisses. In the taluks of Karur and Aravakkurichi, Pyroxenes, Amphiboles and Peridotites are found distributed. Small amounts of charnokites are scattered in Karur and Thanthoni panchayat unions areas.

Mineral resources :

This district is rich in minerals. The details of different minerals, available in this district are as follows.

Crystalline lime stone [Cement Grade]:

The limestone deposits occurring between Gajilampatti and Aiyampalayam in parts of Karur, Kulithalai taluks have been estimated at 70 million tonnes to an average depth of 30 metres.

Reserves of 3,04,800 tonnes of high crystalline limestone were located at Kallai of Kulithalai taluk.

Feldspar : Feldspar occurrence was located near Odiapatti ($11^{\circ} 48' N 70^{\circ} 15' E$) and Kadavur ($10^{\circ} 36' N, 78^{\circ} 12' E$).

Quartz : Deposits of quartz occur in Kulithalai and Karur taluks and total reserves were estimated to be of the order of 2,00,000 tonnes. The quartz is of good quality and suitable for ceramic and other industries.

Precious stones : precious stones occur in Uppidamangalam ($10^{\circ} 54' N, 78^{\circ} 10' E$) and Manavadi ($10^{\circ} 53' N, 78^{\circ} 06' E$) in Karur taluk and semi transparent types of gem variety of corundum near Sakkarai kottai ($10^{\circ} 46' 45'' N, 78^{\circ} 14' E$) in Kadavur Zamindari have been recorded.

Sillimanite : it is occurring in Kadavur ($10^{\circ} 36' N, 78^{\circ} 11' E$) and Idayapatti ($10^{\circ} 35' N, 78^{\circ} 13' E$) associated with pegmatite, beryl, tourmaline and limenite. The quantum is estimated to an extent of 515 tonnes.

Mica : Small sized mica books 5 - 8cm across have been noted in the pegmatites at Aiyampalayam, Anaikuttikottam, Uralehikaradu, Kadavur and at Mungilmalai.

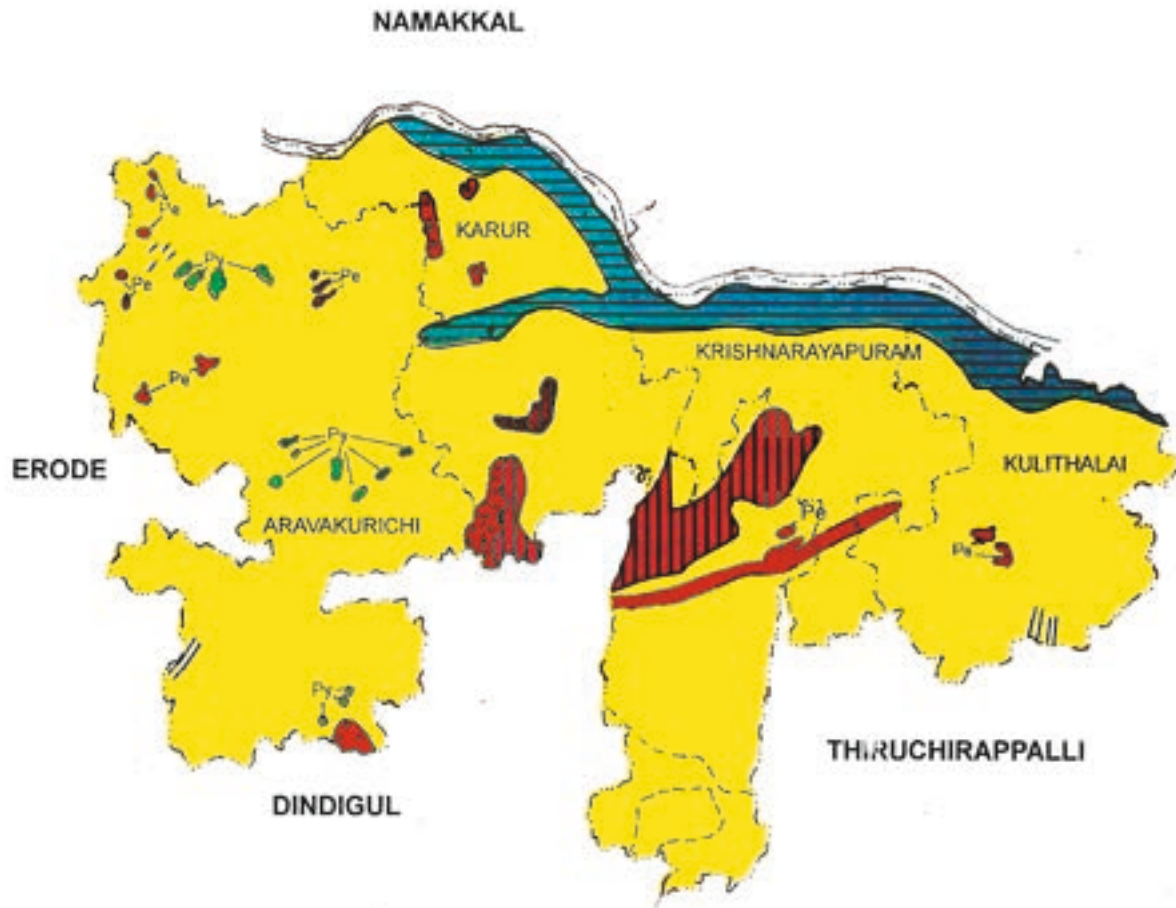
Building stone / Road metal : Granite rocks occurring at several places as patches in Kulithalai and Karur taluks are being used as building material.

Ground water : In the hard rock area, the ground water is confined to the pores in the weathered rocks and joints and fractures in the jointed rocks. Ground water could be developed only from wells within the depth of 18 metre piercing chiefly weathered and jointed rocks.









GEOLOGY

KARUR DISTRICT



LEGEND

-  QUATERNARY
-  FELDSPARTHIC GNEISS
-  CHARNOCKITE
-  PERIODOTITE
-  PYROXENE & AMPHIBOLE/GRANOLITE
-  QUARTZITE
-  BIOTITE & HORNBLENDE

PHYSIOGRAPHY

KARUR DISTRICT

Karur district is composed of floodplains of river Cauvery and its tributaries, undulating upland areas.

Karur taluk is having an undulating plains except the flat lands of alluvial deposits in the northern border and the Rangamalai (945 m) rocks in the extreme south. Small sporadic hillocks stand here and there. The elevation ranges from 142 M in the plains to 1034 M in the hillocks. Certain area covered by Vannapatti soil series are badly disturbed by rill erosion. The microtopography of the area is highly variable and the lands are unsuitable for agriculture. Karur taluk is well traversed by river cauvery, Amaravathy and their tributaries Nunganji and Kodavanar.

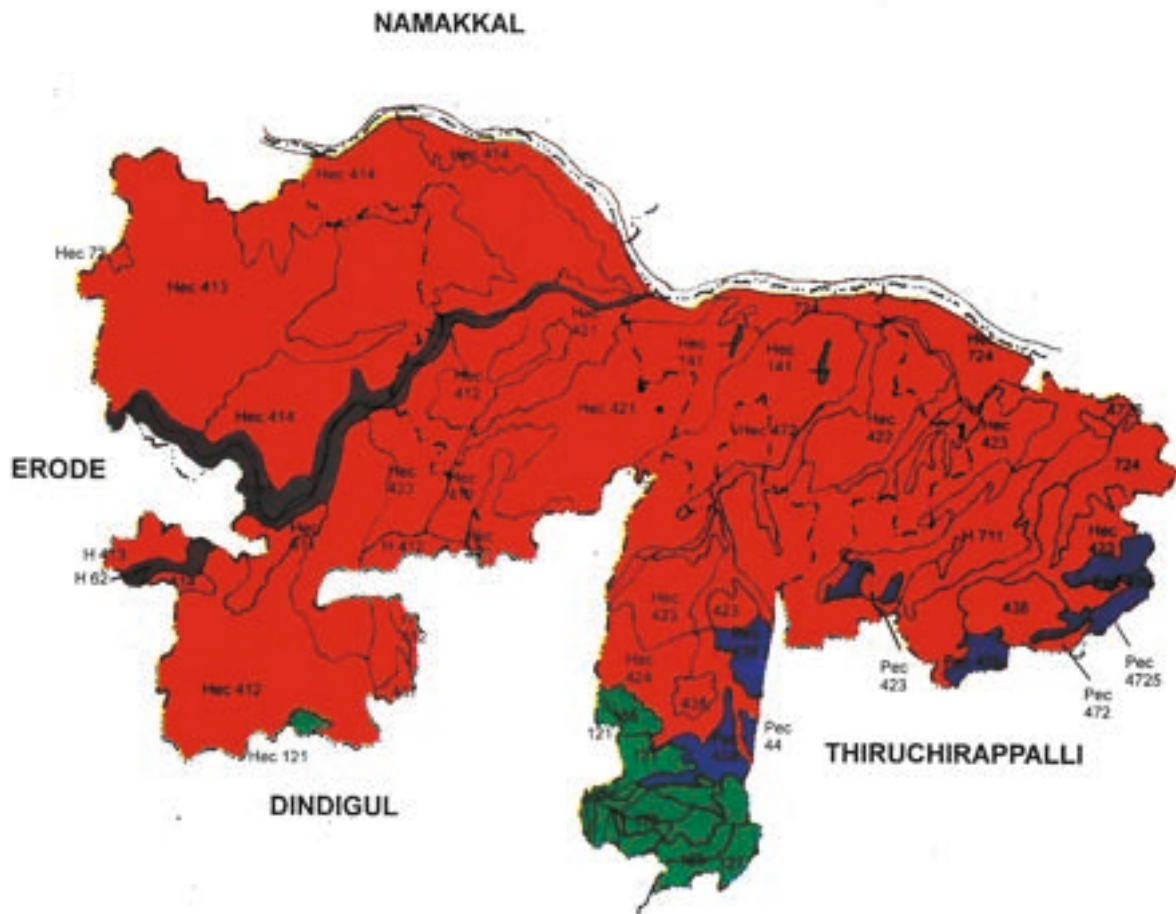
Kulithalai taluk is composed of plain land with gentle slope towards North and North - East except Kadavur hill ranges and Viralmali into the South - East. The highest elevation is 1015 m in the Kadavur hill range. The topography of the area is flat and gently sloping in some of the area. On the toes of Kadavur hills the lands are cut into gullies and the soil profiles have been destroyed. Patches of cultivable lands occur in this area which are vulnerable to gully erosion in future. The streams Pungar and Kattar flow in Kulithalai taluk and run towards Cauvery.

The major physiographic divisions for this district are established as follows.






Pec	:	Tamilnadu plains :
Pec 4 - Inland plain	:	436,438,439 - Gently sloping to undulating uplands
Hec	:	Tamilnadu uplands :
Hec 1 - Tamilnadu uplands	:	121, 127 - Low hills
	:	13 - Hill slopes
	:	141 - Isolated hills / Hillocks
	:	155 - Rolling to undulating foot slopes / lands
	:	164, 165 - Undulating to gently sloping foot slopes
	:	17, 174, 175 - Inter hilly basin
Hec 3 - Tamilnadu uplands	:	undulating uplands
Hec 4 - Tamilnadu uplands	:	411, 412, 413, 414, 421, 422, 423, 424, 438, 472, 4726 - gently sloping to undulating uplands
Hec 6 - Tamilnadu uplands	:	61 - valleys
Hec 7 - Tamilnadu uplands	:	711 - tank irrigated areas
	:	72 - Canal irrigated areas



PHYSIOGRAPHY KARUR DISTRICT



LEGEND

-  INLAND PLAIN (Pec 436, 438, 439, 44, 472)
-  TAMIL NADU UPLANDS (HILLY BASIN)
(Hec 121, 127, 13, 141, 155, 164, 165, 17, 174, 175)
-  TAMIL NADU UPLANDS
(Hec 411, 412, 413, 414, 421, 422, 423, 424, 438, 472, 4726)
-  TAMILNADU UPLANDS (61)
-  TAMILNADU UPLANDS (TANKS & CANAL)
(712, 72)

RIVER BASINS - WATERSHEDS

KARUR DISTRICT

The important rivers flowing and substantially benefitting agricultural activities in this district are Cauvery, Amaravathy and their tributaries. The river Cauvery enters the district at its western extremity. After flowing along the Northern boundary of Karur taluk for about 32 km., the river forms the boundary between Kulithalai and Musiri taluks. Flow in river Cauvery is controlled at Mettur but water is let into the river in large quantities for irrigation by the middle of June.

The important rivers of this district are the Amaravathy and its tributaries.

Amaravathy has its origin by the confluence of jungle streams which run from the Anamalai and Travancore hills. The river enters this district after benefitting Periyar district. The tributaries in the district are Nunganji and Kodavanar. Nunganji rises in the Palani hills and joins Amaravathy near the Southern border of Karur taluk while Kodavanar comes from Dindigul district. Mamundiar river in the scattered hills of Kulithalai taluk runs through North Easterly direction and empties into Uyyakondan channel which takes off from Cauvery.

Noyyal which is a tributary of Cauvery flows along the North West boundary of Karur taluk.

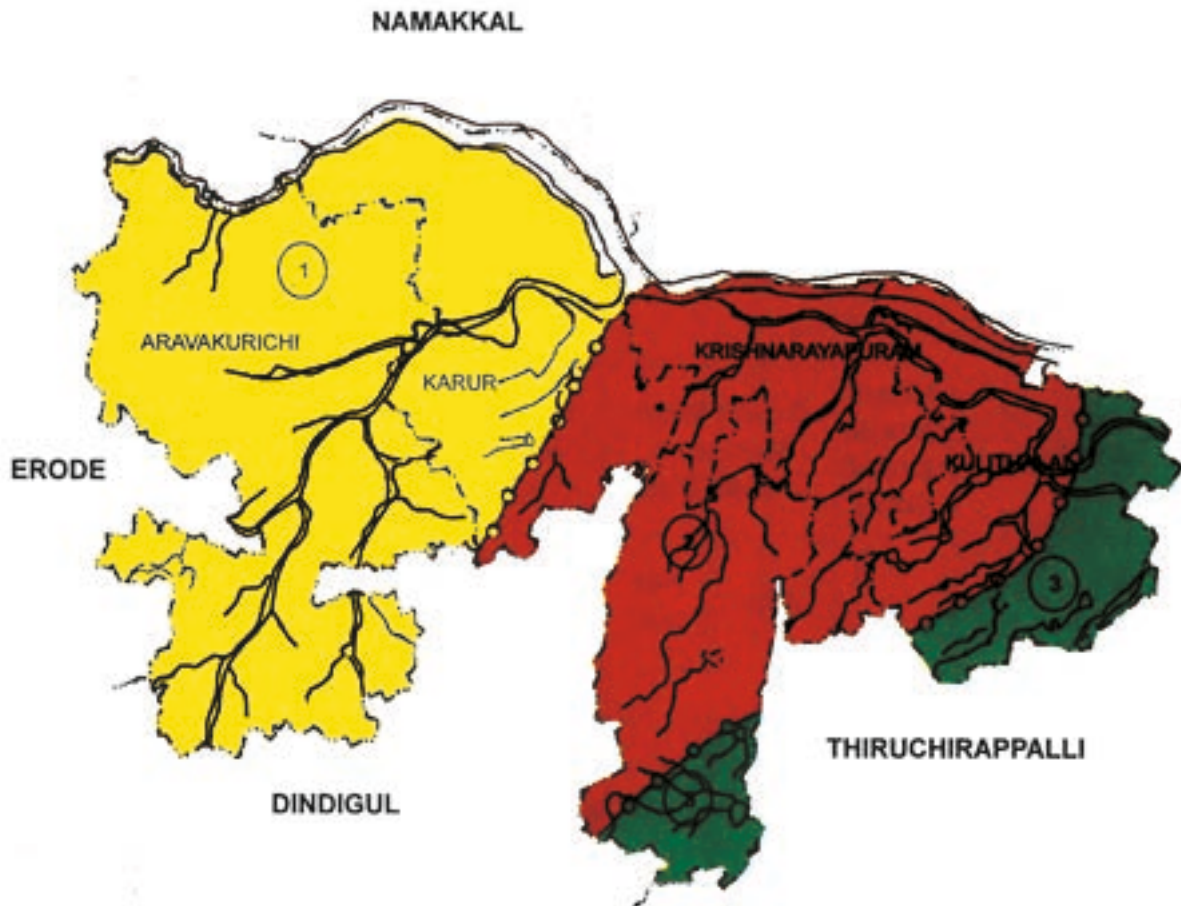
The taluks benefitted by Amaravathy and Kulithalai minor basins are given below.

River basins	Taluks benefitted
1. Amaravathy minor basin	Part of Karur, part of Aravakkurichi, Kulithalai and Krishnarayapuram taluks
2. Kulithalai minor basin	Kulithalai and Krishnarayapuram






RIVER & WATER SHED

KARUR DISTRICT



LEGEND

-  AMARAVATHI MINOR BASIN
-  KULITHALAI MINOR BASIN
-  TIRUCHI MINOR BASIN

RAINFALL DISTRIBUTION

KARUR DISTRICT

The distribution pattern of rainfall in the four taluks of Karur district over a period of 20 years (1976 - 1995) is furnished below.

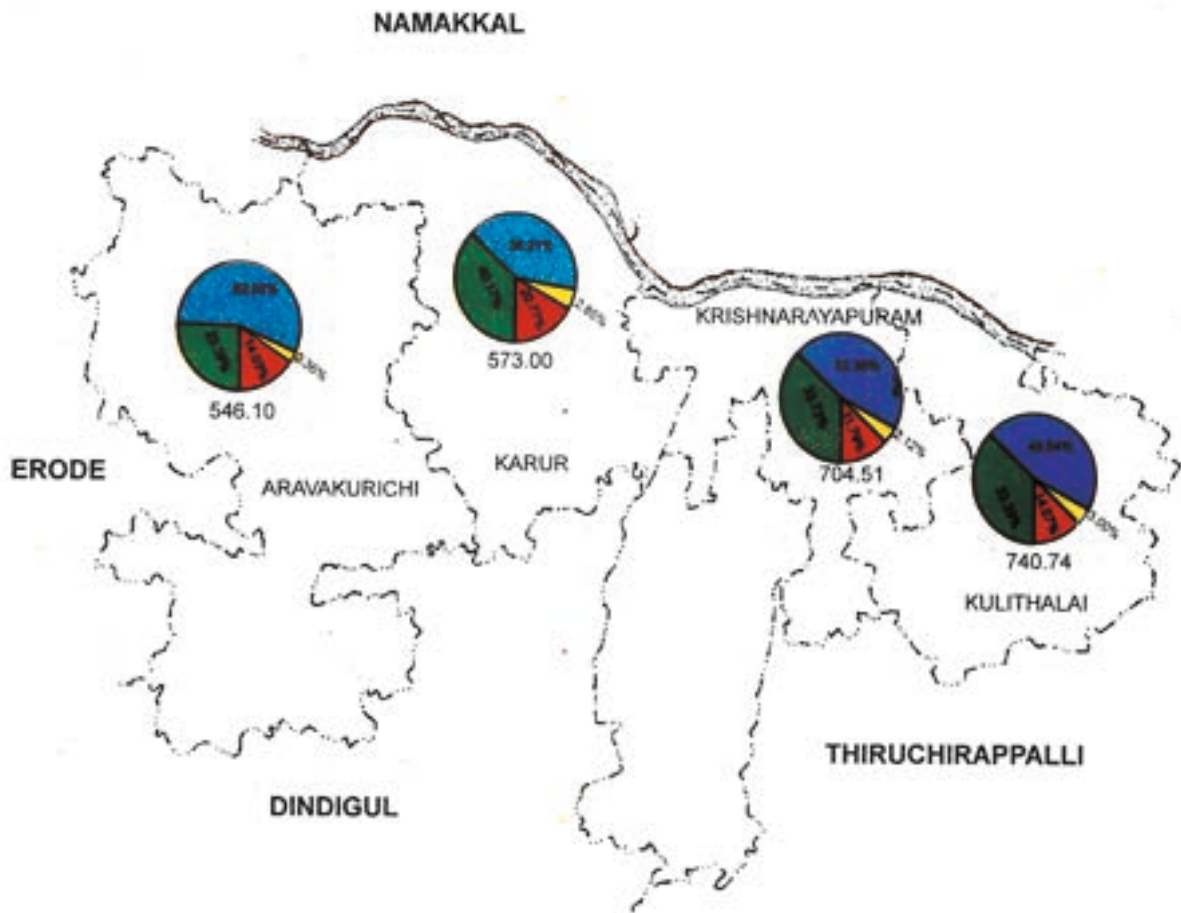
Sl. No.	Taluks	Mean annual rainfall (mm)	Seasonal rainfall							
			South West Monsoon (June - Sep)		North East Monsoon (Oct - Dec)		Winter (Jan - Feb)		Summer (Mar - May)	
			mm	Per cent	mm	Per cent	mm	Per cent	mm	Per cent
1.	Aravakkurichi	546.10	128.80	23.59	338.70	62.02	2.00	0.36	76.60	14.03
2.	Karur	573.00	230.20	40.17	207.50	36.21	16.30	2.85	119.00	20.77
3.	Krishnarayapuram	704.51	237.61	33.73	368.86	52.36	15.00	2.12	83.04	11.79
4.	Kulithalai	740.74	248.02	33.39	367.97	49.54	20.28	3.00	104.47	14.07

In all the four taluks of Karur district, North-East monsoon is the main source of water both for agricultural and drinking purposes and to some extent during South-West monsoon. The mean annual rainfall is maximum in Kulithalai (740.74mm) taluk followed by Krishnarayapuram (704.51mm) taluk.



RAINFALL

KARUR DISTRICT



LEGEND



573 (mm)

MEAN ANNUAL RAINFALL IN TALUK

TEMPERATURE

KARUR DISTRICT

The atmospheric temperature is the primary source of soil temperature. The atmospheric temperature was used for the calculation of soil temperature by adding 3.5°C. The radiation absorbed by soil and the amount of heat enters the soil are controlled by climate, colour of soil, altitude and aspect of land and the vegetative cover present on the soil. Soil temperature is one of the important soil properties which controls within limits plant growth, soil formation and soil properties through controlling evapotranspiration, effective rainfall and type of vegetation and organic matter decomposition. Soil temperature exerts a strong influence on biological activities in soil and plant, rate of physical and chemical processes within the soil and regulates soil-air movement. Nitrification process through micro organisms are at the maximum between 80 - 90°F. If the soil temperature is 35°C and above, root growth and germination of most of the plants are severely restricted.

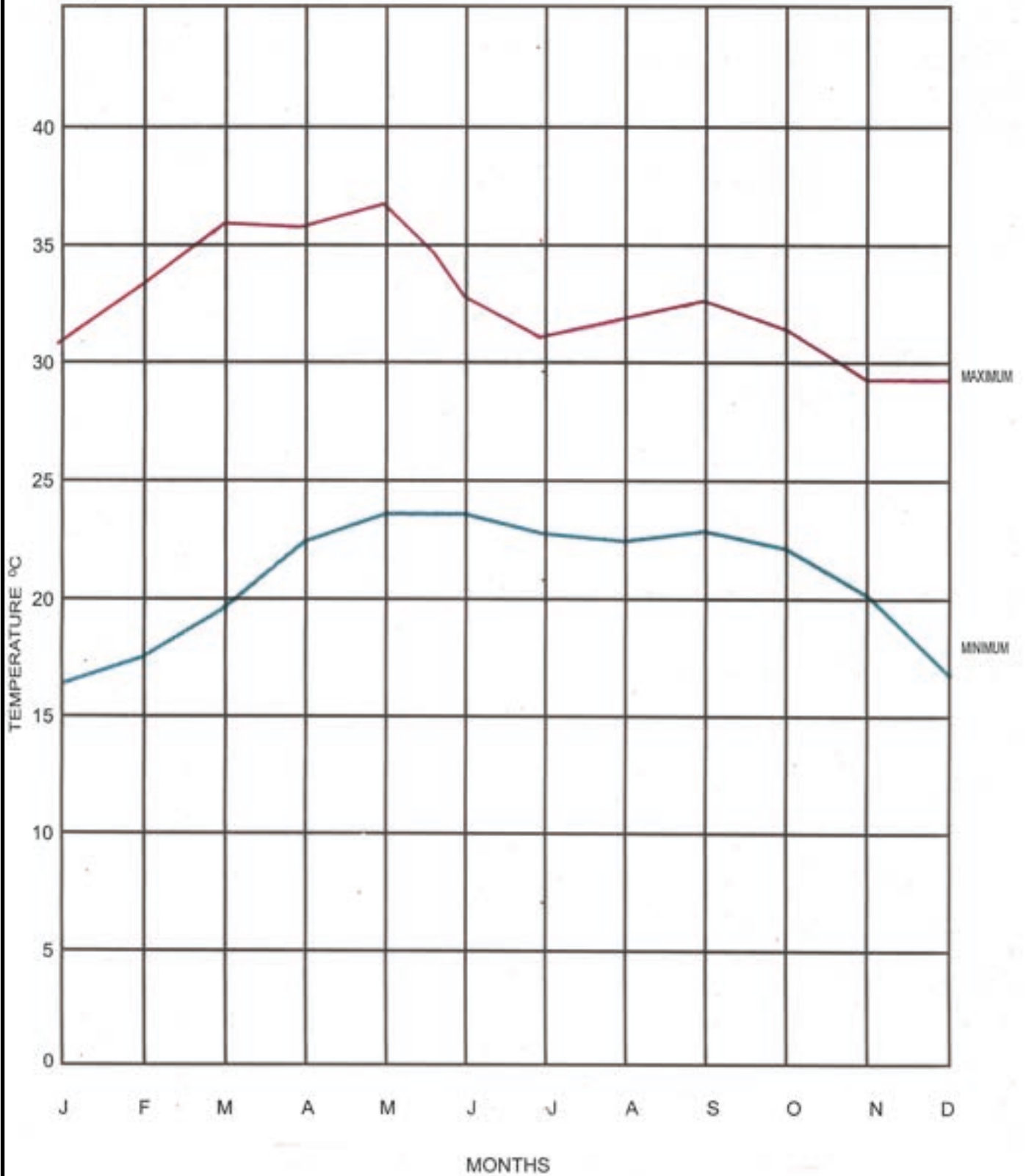
The atmospheric temperature data of Karur district recorded over a period of 20 years (1976 - 1995) was computed and the mean maximum and minimum temperatures were arrived at and presented in the form of a graph. From the graph, the hot months happen to be April to June with the maximum temperature ranging from 29.1 to 30.9°C and the cool months being December-February with the minimum temperature ranging from 17.1 to 19.1°C. Sowing of heat sensitive crops should be done carefully. Soil mulching will reduce the soil temperature to some extent. For sowing of crops during hot months, temperature tolerant crops and varieties may be recommended. Temperature will help to predict the maturity dates.

Soil moisture regime : USTIC

USTIC moisture regime : The Ustic (L.Ustusburnt, implying dryness) moisture regime is one that is limited but is present at a time when conditions are suitable for plant growth. The soil is dry in some or all parts for 90 or more cumulative days per year. But the moisture control section is moist in some part either for more than 180 cumulative days per year or for 90 or more consecutive days. In tropical and subtropical regions, the moisture regime is USTIC if there is atleast one rainy season of three months or more.

Sl. No.	Months	Temperature (°C)		
		Maximum	Minimum	Mean
1.	January	30.7	17.7	24.2
2.	February	33.0	19.1	26.1
3.	March	36.2	20.8	28.5
4.	April	35.7	23.8	29.8
5.	May	37.2	24.8	30.9
6.	June	33.2	24.9	29.1
7.	July	31.1	24.0	27.6
8.	August	32.1	23.7	27.9
9.	September	32.6	23.6	28.1
10.	October	31.5	22.6	27.1
11.	November	29.8	21.2	25.5
12.	December	29.9	17.1	23.5

TEMPERATURE KARUR DISTRICT



OMBROTHERMIC DATA

KARUR DISTRICT

The mean monthly rainfall and temperature of Karur district over a period of 20 years (1976 - 1995) are furnished in the form of an Ombrothermic diagram.

Sl. No.	Months	Mean Rainfall (mm)	Mean Temperature (°C)
1.	January	7.1	24.2
2.	February	6.3	26.1
3.	March	8.0	28.5
4.	April	33.7	29.8
5.	May	54.2	30.9
6.	June	25.1	29.1
7.	July	28.9	27.6
8.	August	41.0	27.9
9.	September	116.1	28.1
10.	October	128.4	27.1
11.	November	141.3	25.5
12.	December	51.5	23.5

Season	(mm)
Winter (January - February)	= 13.4
Summer (March - May)	= 95.9
South West monsoon (June - September)	= 211.1
North East Monsoon (October - December)	= 321.2
Total	= 641.6

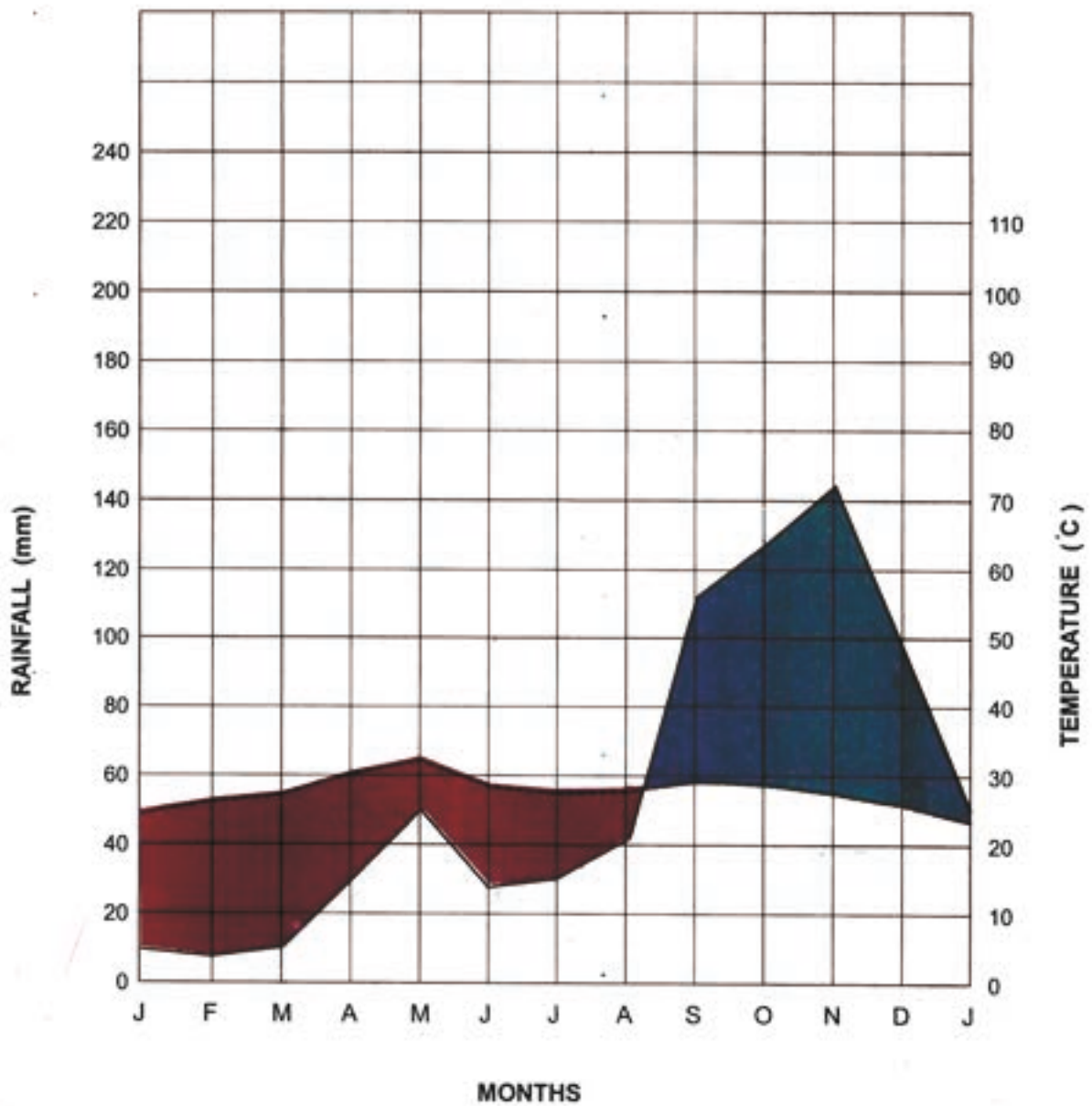
TEMPERATURE REGIME :

As the mean annual soil temperature is above 28°C and the difference between mean summer and mean winter temperature is less than 5°C, the area is falling under "ISO MEGATHERMIC" soil temperature regime.

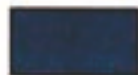
The Ombrothermic diagram reveals the wet and dry periods. Agricultural activities can be programmed accordingly.

OMBROTHERMIC DIAGRAM

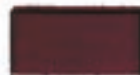
KARUR DISTRICT



WET MONTHS



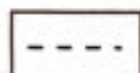
DRY MONTHS



RAINFALL (mm)



TEMPERATURE (°C)



TALUK WISE LAND USE PATTERN

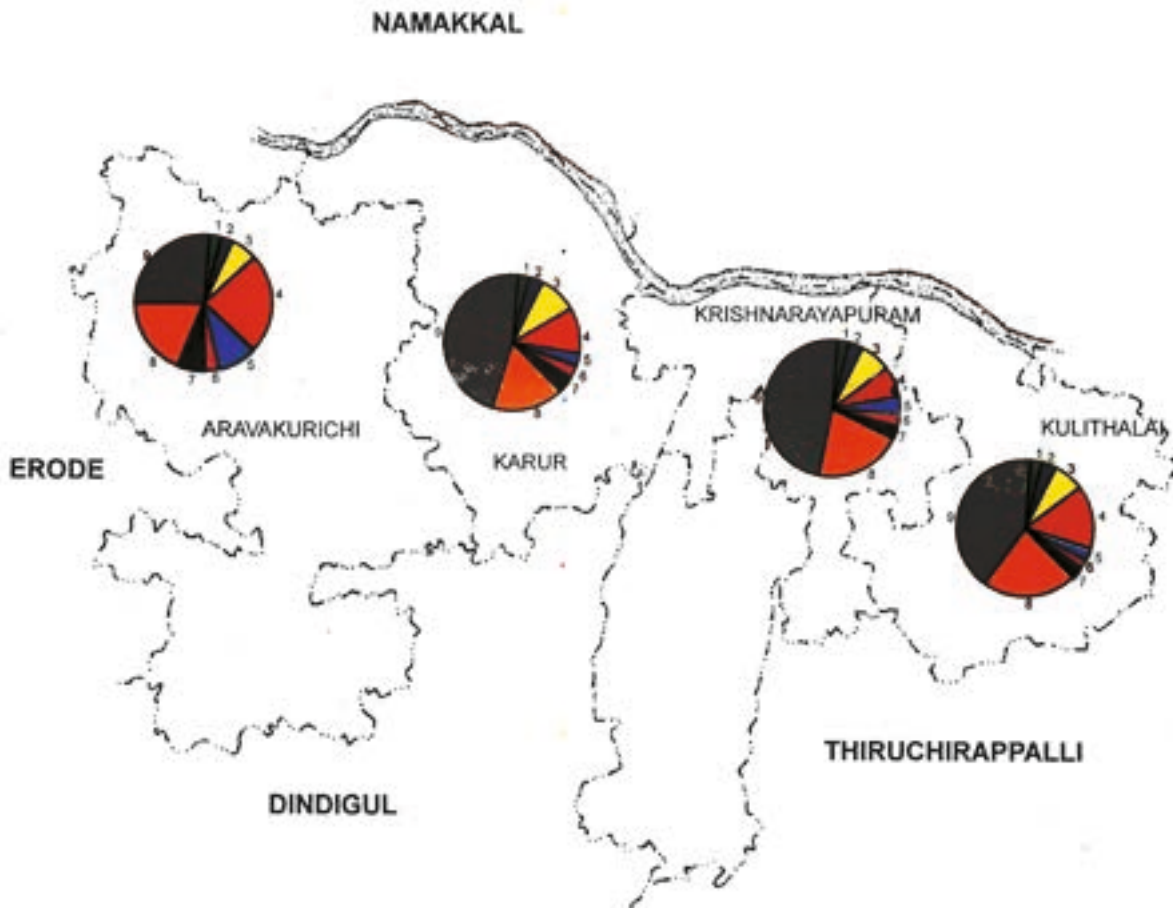
KARUR DISTRICT

In Karur district only 1,04,358 (36.04%) hectares are used for regular agricultural purposes, out of the total geographical extent of 2,89,557 hectares, a total of 67,966 (23.47%) hectares are kept as fallow lands. The lands put to non-agricultural purposes cover 33,605 (11.61%) hectares. The cultivable waste lands of 62,967 (21.75%) hectares can be made use by suitable package of practices.

Sl. No.	Particulars	Taluks with extent (in ha and percent to total)				Total
		Aravakkurichi	Karur	Krishnarayapuram	Kulithalai	
1.	Forests	294 (0.30)	18 (0.03)	152 (0.39)	5,723 (6.23)	6,187 (2.13)
2.	Uncultivable wastes	528 (0.54)	545 (0.90)	615 (1.56)	1,218 (1.33)	2,906 (1.00)
3.	Land put to non agricultural uses	8,107 (8.30)	8,116 (13.38)	5,310 (13.44)	12,072 (13.15)	33,605 (11.61)
4.	Cultivable wastes	30,779 (31.53)	10,025 (16.53)	3,215 (8.14)	18,948 (20.64)	62,967 (21.75)
5.	Permanent pastures	6,908 (7.08)	1,296 (2.14)	1,790 (4.53)	740 (0.81)	10,734 (3.71)
6.	Land under trees not included under net area sown	39 (0.04)	76 (0.13)	328 (0.83)	391 (0.43)	834 (0.29)
7.	Current Fallows	4,400 (4.51)	2,645 (4.36)	400 (1.01)	1,078 (1.17)	8,523 (2.94)
8.	Other & allows	22,021 (22.56)	9,138 (15.07)	9,477 (23.99)	18,807 (20.49)	59,443 (20.53)
9.	Net area sown	24,540 (25.14)	28,784 (47.46)	18,216 (46.11)	32,818 (35.75)	1,04,358 (36.04)
	Total Geographical extent	97,616 (100.00)	60,643 (100.00)	39,503 (100.00)	91,795 (100.00)	2,89,557 (100.00)



LAND USE PATTERN KARUR DISTRICT



LEGEND

- | | |
|---|---|
|  | 1. FOREST |
|  | 2. UNCULTIVABLE WASTE |
|  | 3. LAND PUT TO NON - AGRICULTURAL USES |
|  | 4. CULTIVABLE WASTE |
|  | 5. PERMANENT PASTURE |
|  | 6. LAND UNDER TREE CROPS NOT INCLUDED UNDER NET AREA SOWN |
|  | 7. CURRENT FALLOWS |
|  | 8. OTHER FALLOWS |
|  | 9. NET AREA SOWN |

FOREST

KARUR DISTRICT

In this district, the total extent of forest wealth is 6,187 hectares which represent only 2.13% of the total geographical extent (2,89,557 hectares) of this district.

The types of forests in this district are as given below.

1. Tropical dry deciduous forests
2. Dry mixed deciduous forests
3. Dry ever green forests
4. Sub-tropical hill forests

The above types of forests are located as given below

S. No.	Taluks	Extent (ha)	Percent to total
1.	Aravakkurichi	294	4.75
2.	Karur	18	0.29
3.	Krishnarayapuram	152	2.46
4.	Kulithalai	5,723	92.50
	Total	6,187	100.00

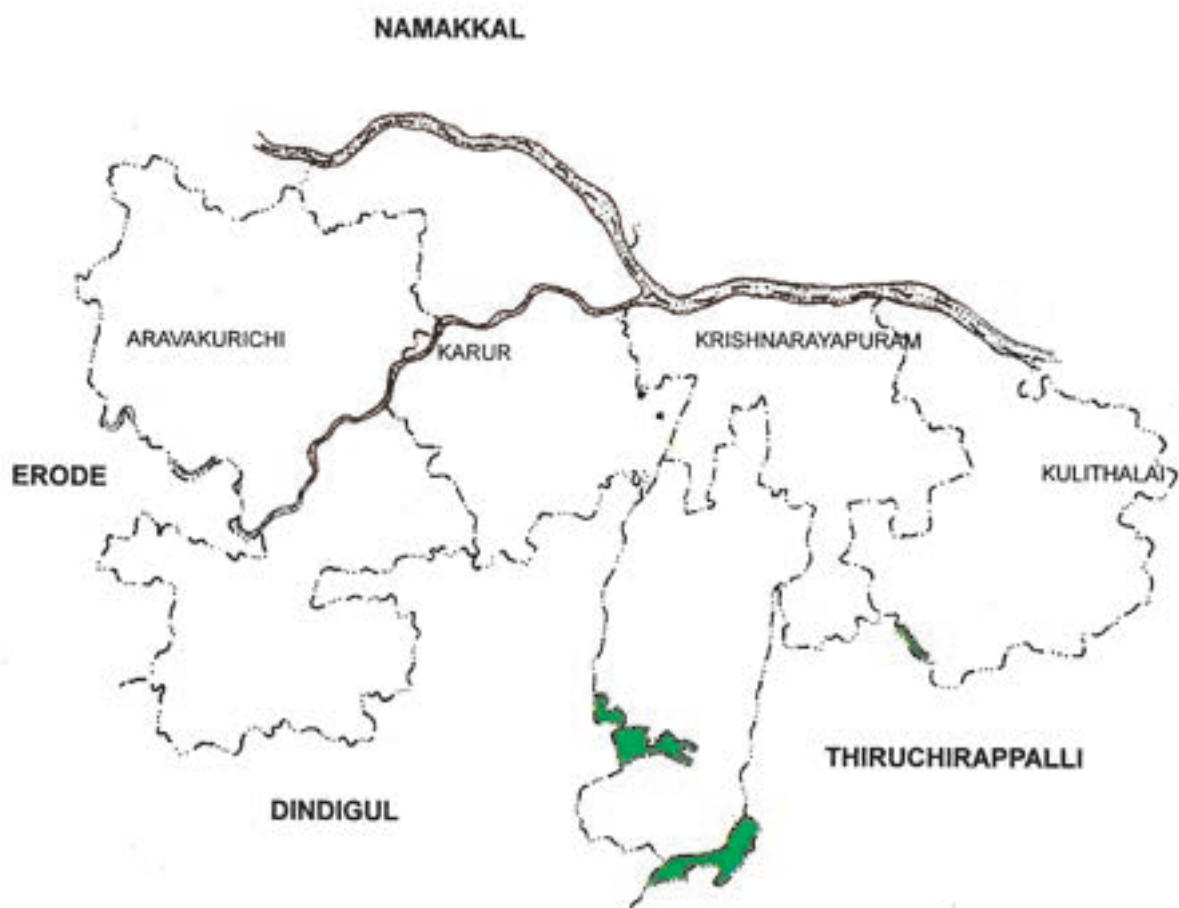
Out of the total forest extent of 6,187 hectares Kulithalai taluk alone occupy 5,723 (92.50%) hectares.

In this district afforestation measures must be taken up which helps to prevent the sedimentation in rivers and floods and to preserve the fertile soils from erosion.



FOREST

KARUR DISTRICT



LEGEND

 FOREST

CROP AREA

KARUR DISTRICT

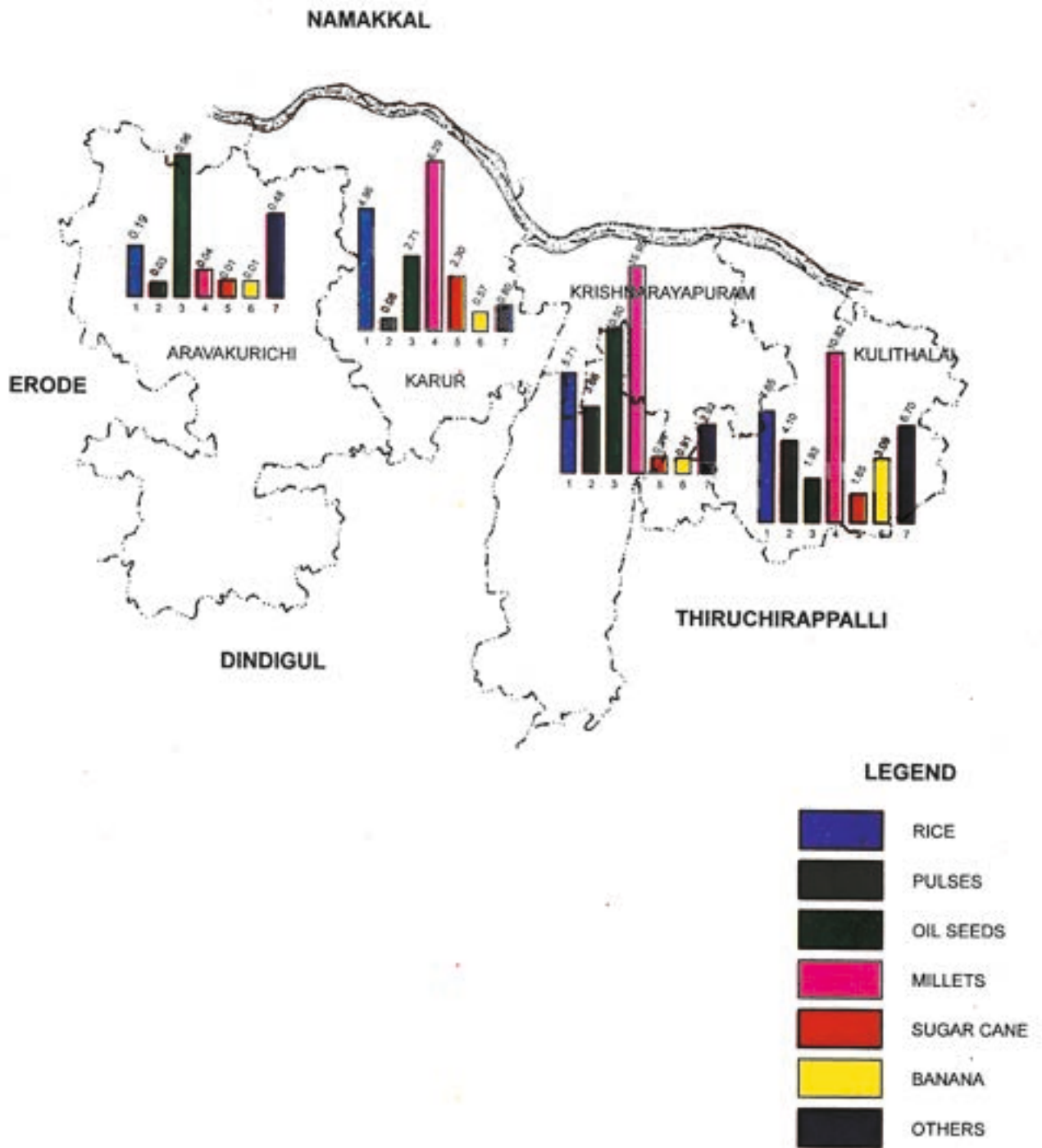
The principal crops of this district are rice, banana, sugarcane, millets, oilseeds, and pulses. Banana is extensively grown in Kulithalai taluk (3090 hectares). In Kulithalai and Krishnarayapuram taluks, betelvine and Korai (*Cyperus Spp.*) are grown commercially under wetland conditions. Pulses are grown in rice fallows. In uplands millets like sorghum, pearl millet and finger millet, oil seeds such as groundnut and gingelly are grown both under irrigated and rainfed conditions. The taluk wise distribution of various crops cultivated in this district is given below.

Sl. No.	Crops	Extent under different crops					
		Taluks with extent (ha)					Percent to total
		Aravakurichi	Karur	Krishnara-yapuram	Kulithalai	Total	
1.	Rice	190	4,960	5,710	7,650	18,510	19.29
2.	Millets	40	6,290	15,950	10,820	7,870	8.20
3.	Oilseeds	960	2,710	10,500	1,930	16,100	16.78
4.	Pulses	30	80	3,660	4,100	33,100	34.49
5.	Sugarcane	10	2,300	940	1,650	4,900	5.11
6.	Banana	10	570	910	3,090	4,580	4.77
7.	Others	480	800	2,920	6,700	10,900	11.36
	Total	1,720	17,710	40,590	35,940	95,960	100.00

In Karur rice crop is grown in 18,510 (19.29%) hectares. Pulses and oil seeds are cultivated in 33,100 (34.49%) and 16,100 (16.78%) hectares respectively.



CROP AREA KARUR DISTRICT



CROPPING CALENDER

KARUR DISTRICT

In Karur district, the major crops cultivated are rice, banana, millets, sugarcane, pulses and oil seeds. Rice is grown both in wetland and garden lands. Pulses, banana, sugarcane, and oil seeds are grown in wetland and garden lands after the harvest of rice crop.

In Karur and Krishnarayapuram taluks, millets, tobacco, chillies, vegetables, flowers and pulses are grown under irrigated conditions. Millets, pulses, gingelly are grown under rainfed condition. In Kulithalai taluk, banana and rice are the major crops grown under irrigated conditions. Sugarcane, chillies, vegetables and flowers are grown under irrigated conditions. Betel vine is grown as an inter crop in banana gardens. Pulses, millets, groundnut, gingelly are grown under rainfed condition. In Aravakkurichi taluk, millets, and pulses are grown under rainfed condition. The major cropping pattern of this district is as follows.

I WET LANDS :

Rice	-	Kuruvai
		Thaladi
		Samba
Rice - (Samba)	-	Pulses (irrigated)
Rice (Samba)	-	Oilseeds (irrigated)
Rice (Samba)	-	Banana

II GARDEN LANDS :

Rice (Samba)	-	Pulses
Rice (Samba)	-	Oil seeds
Rice (Samba)	-	Cotton
Chillies	-	Cumbu
Groundnut (irrigated)	-	Rice (Samba)
Ragi (irrigated)	-	Rice (Samba)

III RAINFED CROPS :

Sorghum	-	Red gram (mixed)
Cumbu	-	Pulses (mixed)
Groundnut	-	Pulses (mixed)
Horsegram	-	—

SOURCES OF IRRIGATION

KARUR DISTRICT

River channels, wells and tanks play an important role in irrigation in this district.

Cauvery system is the major source. The South-West monsoon provides the bulk of water which is impounded at Mettur. Supplies are regulated there from to a considerable extent.

The Amaravathy river which joins Cauvery irrigates 405 ha in Karur taluk and 1010 ha. in Kulithalai taluk. It is also fed by South-West monsoon but its flow is regulated at Amaravathy dam in Coimbatore district. Karur taluk is benefited by the lower Bhavani project canal. About 40 ha are benefited by Noyyal river, a tributary of Cauvery.

The important channels are Uyyakondan, High level Kattalai channel, Raja Ayyan, Peruvalai South Bank canal etc.,

Besides river channels, the other source of irrigation is wells. Further the gentle slope of the land and other important factors favour well irrigation considerably.

A number of small irrigation tanks and ponds exist in this district.

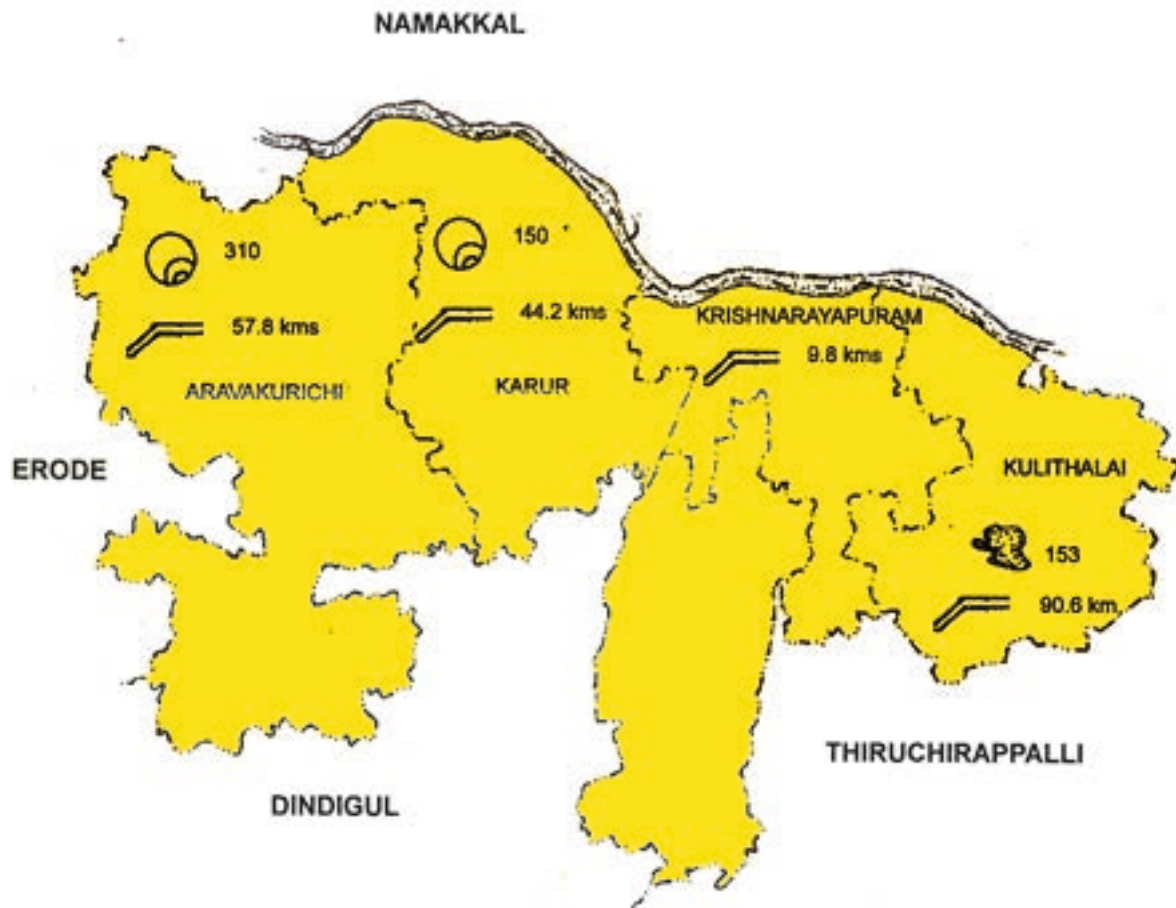
The extent irrigated by canals, wells and tanks are furnished below.

Sl. No.	Taluks	Sources of Irrigation		
		Canal length (Extent irrigated in hectares)	Wells (Extent irrigated in hectares)	Tanks (Extent irrigated in hectares)
1.	Aravakkurichi	—	1,930	1,264
2.	Karur	29	2,499	2,432
3.	Krishnarayapuram	97	3,754	1,182
4.	Kulithalai	316	1,123	3,919
Total		442	9,306	8,797



SOURCES OF IRRIGATION

KARUR DISTRICT



LEGEND

-  WELLS
-  TANKS
-  CANAL

AGRICULTURAL INSTITUTIONS

KARUR DISTRICT

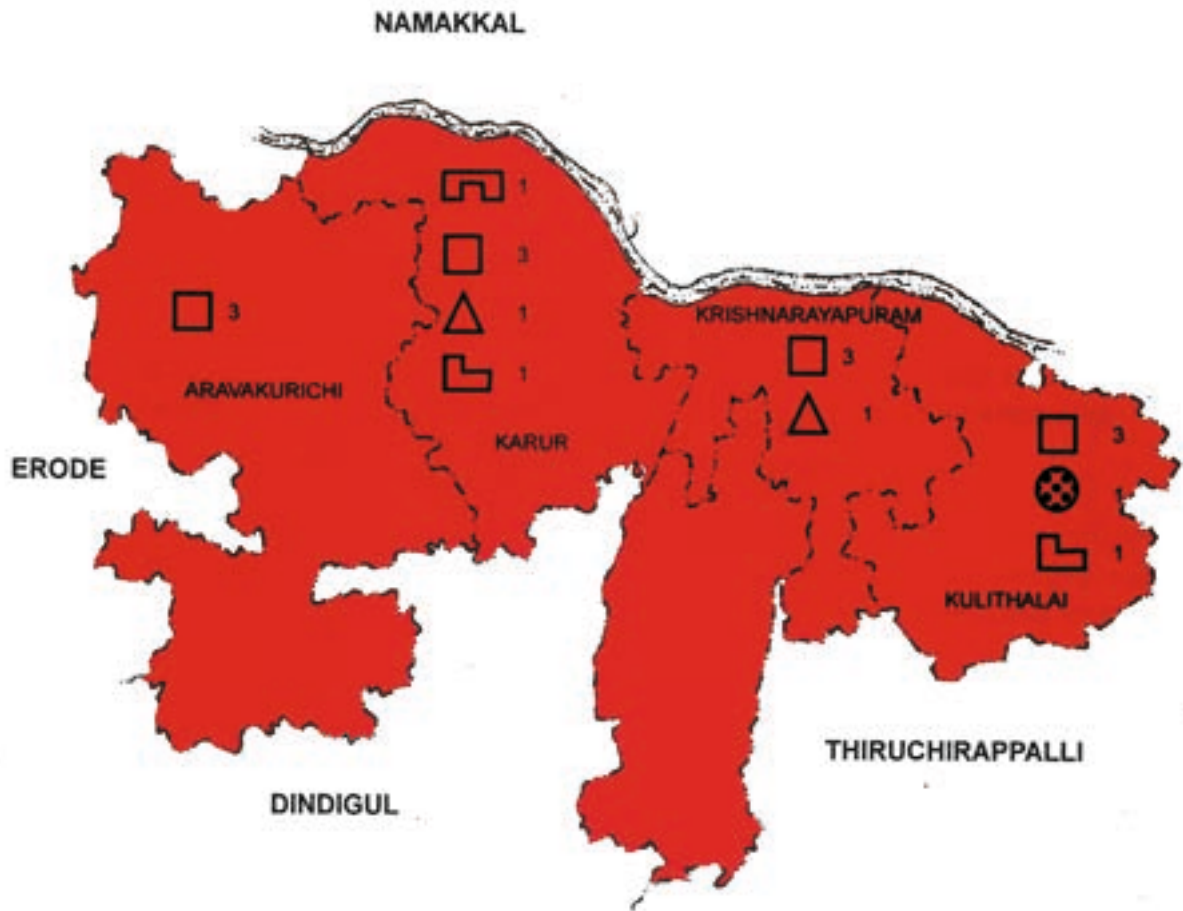
Karur is a newly formed district and hence the various agricultural institutions are less.

I. No.	Name of the Institution	Taluks				Total (Nos)
		Aravakkurichi	Karur	Krishnaraya puram	Kulithali	
1.	Office of the Joint Director of Agriculture	—	1	—	—	1
2.	Office of the Assistant Director of Agriculture	—	1	—	1	2
3.	Agricultural depots	3	3	3	3	12
4.	State seed Farms	—	—	—	1	1
5.	Regulated markets	—	1	1	—	2
6.	Agro service centres	—	1	—	1	2
Total		3	7	4	6	20



AGRICULTURAL INSTITUTIONS

KARUR DISTRICT



REFERENCE

- District boundary
- Taluk boundary
- River

LEGEND

- OFFICE OF J.D.A.
- OFFICE OF THE A.D.A.
- AGRICULTURAL DEPOTS.
- STATE SEED FARM
- REGULATED MARKETS
- AGRO SERVICE CENTRE

AGRO INDUSTRIES

KARUR DISTRICT

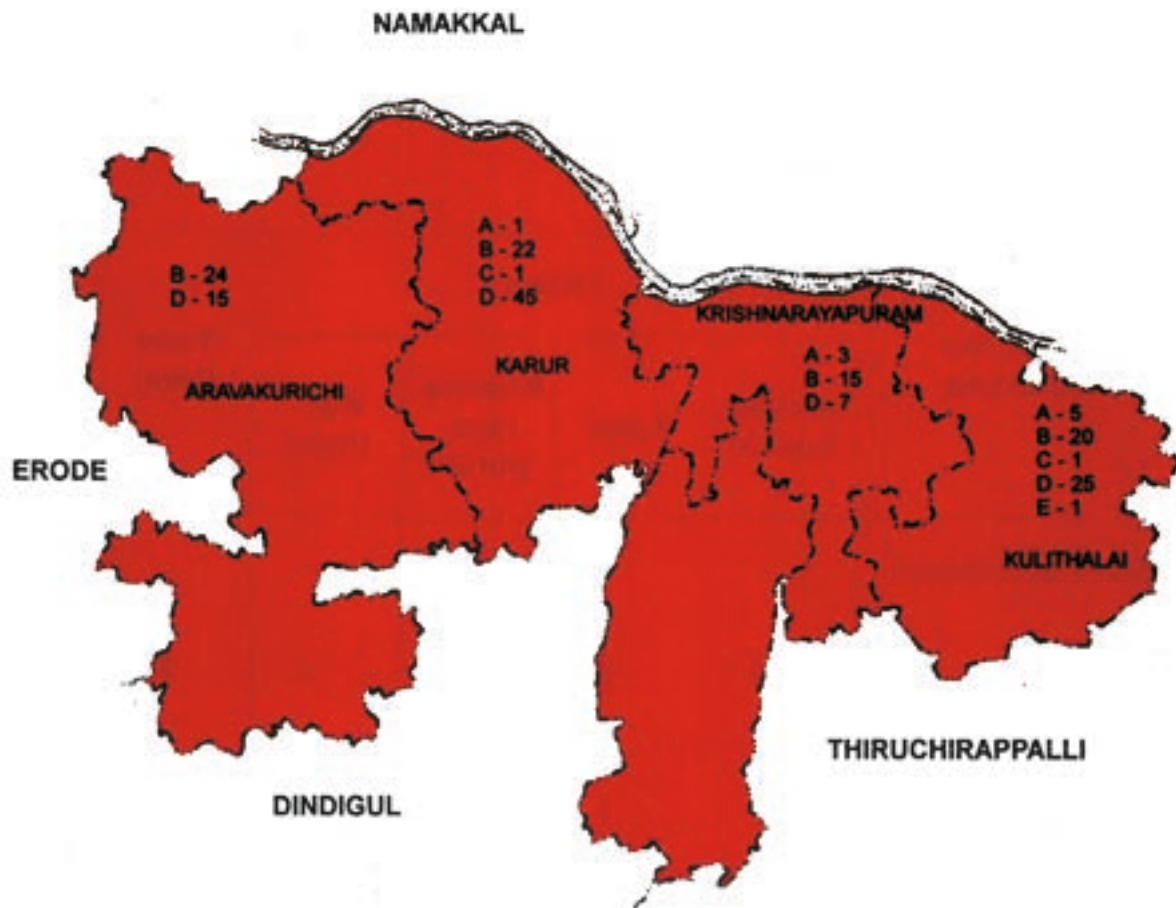
The details of Agro based Industries functioning in four taluks of Karur district are furnished below.

Sl. No.	Name of the Industries	Taluks				Total (Nos)	Map symbol
		Aravak-kurichi	Karur	Krishna-rayapuram	Kuli-thalai		
1.	Coir and coir product industries	—	1	3	5	9	A
2.	Modern rice mill	24	22	15	20	81	B
3.	Sugar factory	—	1	—	1	2	C
4.	Oil centres	15	45	7	25	92	D
5.	Mat industry	—	—	—	1	1	E
Total		39	69	25	52	185	

In addition to the above industries, agricultural implement industries, Areca nut, Cattle feed industry, and Tobacco and cigar industries are functioning.



AGRO INDUSTRIES KARUR DISTRICT



REFERENCE

- District boundary
- Taluk boundary
- River

LEGEND

- A - COIR AND COIR PRODUCTS INDUSTRIES
- B - MODERN RICE MILL
- C - SUGAR FACTORY
- D - OIL CENTRE
- E - MAT INDUSTRY

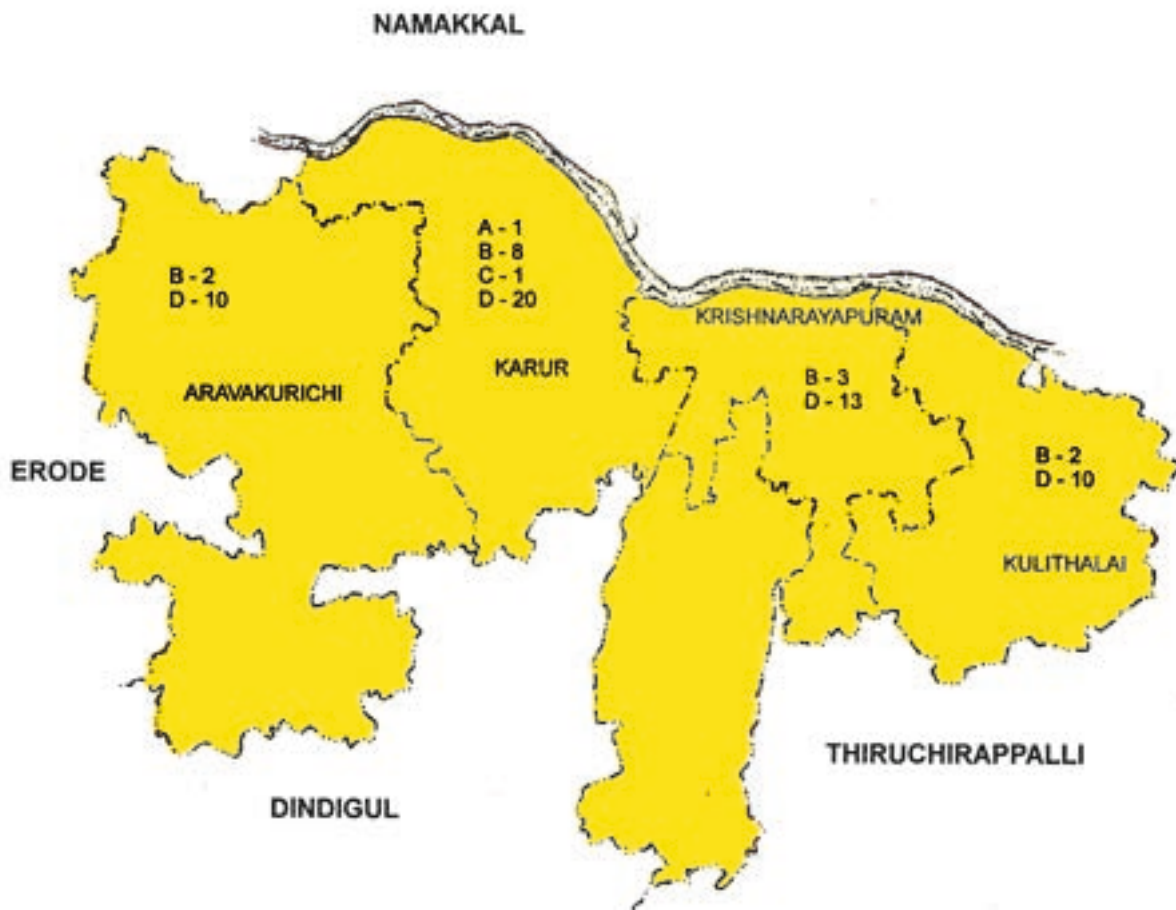
ANIMAL HUSBANDRY INSTITUTIONS

KARUR DISTRICT

Sl. No.	Name of the Institutions	Taluks				Total (Nos)	Map symbol
		Aravak-kurichi	Karur	Krishna-rayapuram	Kulithalai		
1.	Veterinary Hospital	—	1	—	—	1	A
2.	Veterinary dispensary	2	8	3	2	15	B
3.	Mobile veterinary dispensary	—	1	—	—	1	C
4.	Animal husbandry sub centres	10	20	13	10	53	D
Total		12	30	16	12	70	



ANIMAL HUSBANDRY INSTITUTIONS KARUR DISTRICT



LEGEND

- A - VETERINARY HOSPITAL
- B - VETERINARY DISPENSARY
- C - MOBILE VETERINARY DISPENSARY
- D - ANIMAL HUSBANDRY SUB CENTRE

DISTRIBUTION OF SOIL SERIES

KARUR DISTRICT

SOIL SERIES : Soil series is a grouping of soil having similar profile characteristics developed from similar parent material under the same climatic conditions. In Karur district ten soil series and five soil associations were identified Inugur (92,785 ha) followed by Tulukkanur (90,248 ha) had the highest extent of soils.

Sl. No.	Name of soil series	Symbol	Name of taluks with extent (hectares)				Total (ha)	Percent to total
			Aravakkurichi	Karur	Krishnarayapuram	Kulithalai		
1.	Adhanur	Adh	—	—	—	3,497	1.20	
2.	Inugur	Igr	18,786	40,201	19,888	92,785	32.04	
3.	Kalugur	Kur	—	—	509	3,378	1.17	
4.	Palathurai	Pth	—	—	6,827	5,390	4.22	
5.	Palaviduthi	Pvd	—	—	466	9,593	3.47	
6.	Palladam (S ₂)	Pld	1,330	2,905	—	14,355	5.80	
7.	Pilamedu	Pim	—	—	—	3,228	1.11	
8.	Syamalagoundanipudur	Skp	2,870	333	—	3,203	1.11	
9.	Tulukkanur	Ttk	59,293	30,955	—	90,248	31.17	
10.	Vannapatti	Vpt	65	12,382	—	12,447	4.30	
	Mixed Alluvium	MA	978	2,857	4,961	10,231	3.53	
	Others	—	2,023	6,573	6,700	25,875	8.94	
	Forest	—	294	18	—	6,187	2.14	
	Total	—	97,616	60,643	39,503	289,557	100.00	

Note : Others include Soil Associations, Miscellaneous Land Type, River beds and Rockout crops

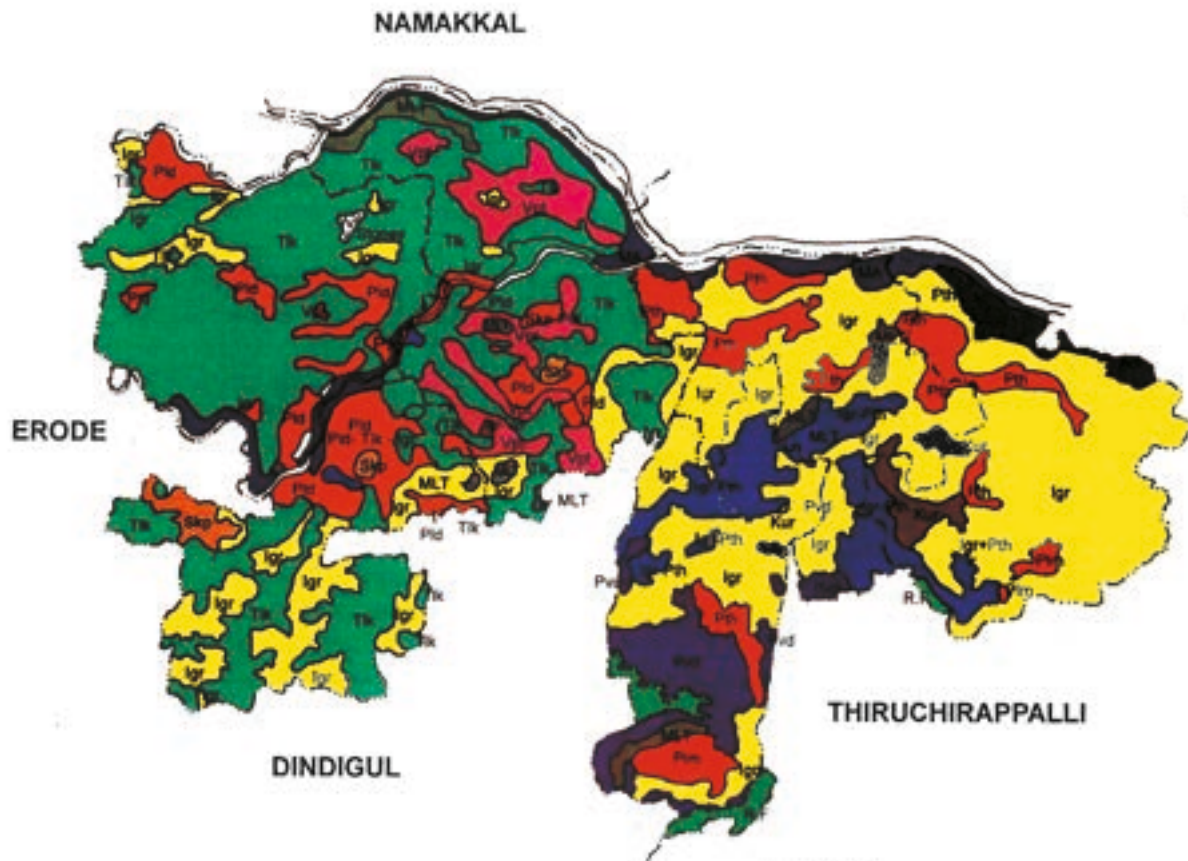
SOIL ASSOCIATIONS :

Sl. No.	Name of soil series	Symbol	Name of taluks with extent (ha)			Total	Percent to total
			Aravakkurichi	Karur	Krishnarayapuram		
1.	Inugur + Palathurai	Igr + Pth	—	—	4,792	13,220	51.10
2.	Inugur + Vannapatti	Igr + Vpt	—	143	—	143	0.55
3.	Palladam + Tulukkanur + Inugur	Pld + Ttk + Igr	326	—	—	326	1.26
4.	Syamalagoundanipudur + Palladam	Skp + Pld	—	476	—	476	1.84
5.	Tulukkanur + Palladam	Ttk + Pld	653	191	—	844	3.26
	Miscellaneous Land Type	MLT	326	2,191	1,060	4,832	18.67
	River bed	—	457	3,572	848	5,773	22.31
	Rockout crops	—	261	—	—	261	1.01
	Total	—	2,023	6,573	6,700	25,875	100.00






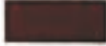



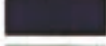



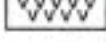
NOTE : Soil Associations : It was the mapping unit adopted to delineate the boundaries of two or three soil series, when their boundaries change abruptly at short intervals. Miscellaneous Land Type : It was the name given to the soils which are inaccessible for orderly examination or where, for other reasons, it is not feasible to classify the soil.







SOIL KARUR DISTRICT



LEGEND

	IRUGUR	(lgr)		ADHANUR	(Adn)
	TULUKKANUR	(Ttk)		PILAMEDU	(Plm)
	SYMALAGOUNDANPUDUR (Skp)			KALUGUR	(Kur)
	PALLADAM	(Pid)		MISCELLANEOUS LAND TYPE	(MLT)
	PALATHURAI	(Pth)		MIXED ALLUVIUM	(MA)
	PALAVIDUTHI	(Pvd)		RESERVED FOREST (R.F)	
	VANNAPPATTI	(Vpt)		STONEY (Rock out crops)	

REFERENCE

-  District boundary
-  Taluk boundary
-  Forest boundary
-  River

ADHANUR (Adn) SOIL SERIES

Brief description	:	Dark greyish brown to dark yellowish brown, very deep, non calcareous, loamy textured soils derived from Cauvery alluvium having sand layer within 100cm.
Physiography	:	Tamilnadu east coast plain - riverine flat land form
Drainage	:	Moderately drained
Taxonomy	:	Fine loamy, mixed, isomegathermic, deep, Vertic Ustropepts
Typifying pedon	:	Adhanur-sandy clay loam-cultivated

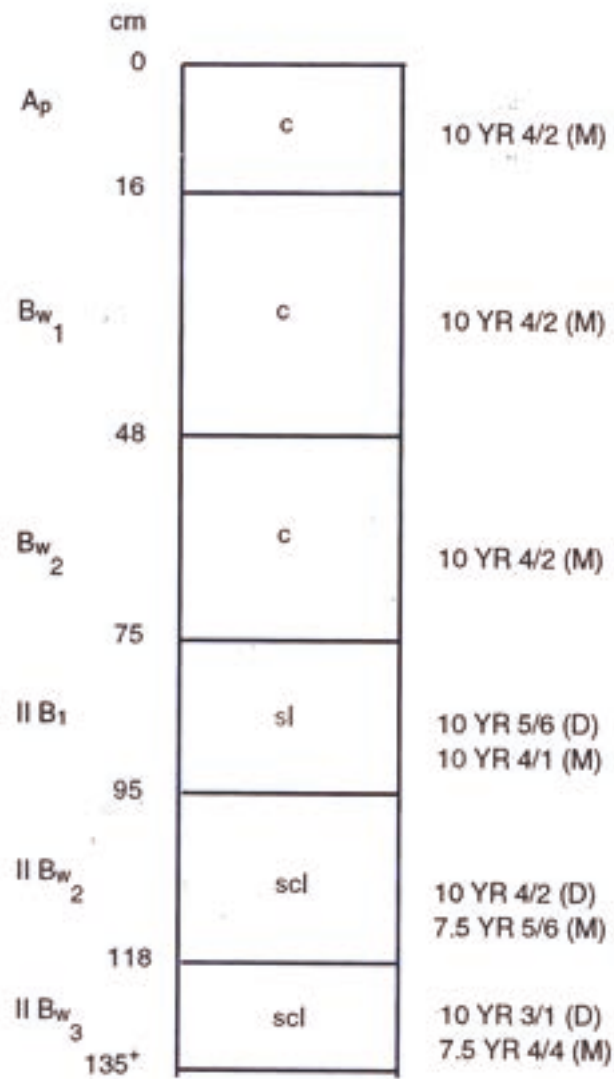
Profile description

Horizon	Depth (cm)	Description
A _p	0 - 16	Dark greyish brown (10 YR 4/2 M); clay; strong, medium to coarse subangular blocky; firm, sticky and plastic; many fine and very few medium and very fine roots; few medium and common fine pores; slight effervescence; moderately slow permeability; clear smooth boundary; pH 8.2.
B _{w1}	16 - 48	Dark greyish brown (10 YR 4/2 M); clay; strong, coarse, sub-angular blocky; very firm, sticky and very plastic; few fine and very few fine roots; few fine and many very fine pores; slight effervescence; slow permeability; clear smooth boundary; pH 8.0.
B _{w2}	48 - 75	Dark greyish brown (10 YR 4/2 M); clay; subangular blocky; firm; sticky and plastic; distinct slickensides and prominent pressure faces; very few very fine roots; many very fine and few fine pores; slight effervescence slow permeability; clear smooth boundary; pH 7.8.
II B ₁	75 - 95	Yellowish brown (10 YR 5/6 D); dark grey (10 YR 4/1 M); sandy loam; weak to moderate, medium to coarse, subangular blocky; friable, sticky and slightly plastic; few fine to medium distinct, very dark brown to black (10 YR 2/1.5) mottlings; very few irregular quartz gravels upto 2cm size; very few, very fine roots; very few medium, many fine and very fine pores, slight effervescence; moderately slow permeability; clear smooth boundary; pH 8.0.
II B _{w2}	95 - 118	Dark greyish brown (10 YR 4/2 D) strong brown (7.5 YR 5/6 M); sandy clay loam; moderate, medium, subangular blocky; slightly hard, slightly firm, slightly sticky and slightly plastic; few fine to medium, distinct very dark brown to black (10 YR 2/1.5) mottlings; very few, small, irregular quartz gravels; many fine and very fine pores; clear smooth boundary; pH 7.7.
II B _{w3}	118 - 135+	Dark grey (10 YR 3/1 D) dark brown (7.5 YR 4/4 M); sandy clay loam; moderate, medium to coarse subangular blocky; slightly hard, slightly firm, sticky and plastic; few fine to medium, distinct very dark brown to black (10 YR 2/1.5) mottlings; slight effervescence; pH 8.0.

Potentials and limitations of Adhanur soil series :

<i>Potentials</i>	<i>Limitation</i>
- Very deep	- Moderately slow permeability
- Fine textured	- Mild to moderate alkalinity
- Flatness	- Calcareousness
- Moderately well drained	
- High water holding capacity	
- medium to high cation exchange-capacity	
- High organic matter	
- Free from salinity	

ADHANUR (Adn) SOIL SERIES



IRUGUR (Igr) SOIL SERIES

Brief description	:	Red to dark red, fine loamy, non calcareous, well drained, slightly acidic to neutral soils.
Physiography	:	Tamilnadu uplands - very gently sloping land form
Drainage	:	Well drained
Taxonomy	:	Fine loamy, kaolinitic, isomegathermic deep Typic Ustorthents
Typifying pedon	:	Irugur - sandy loam-cultivated fallow

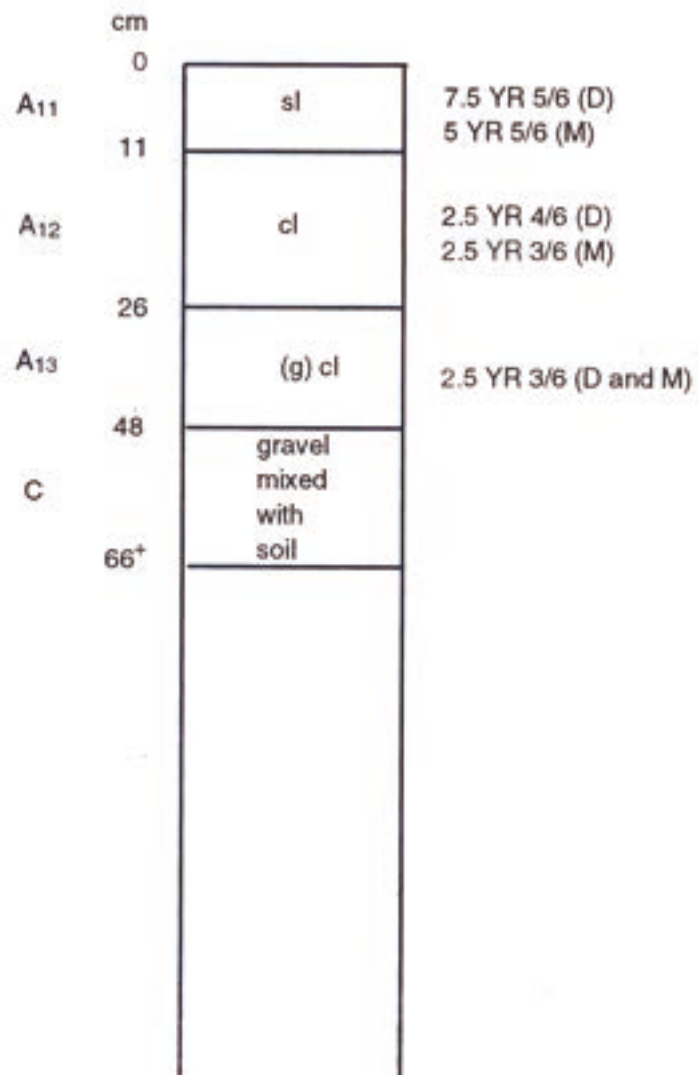
Profile description

Horizon	Depth (cm)	Description
A ₁₁	0 - 11	Strong brown (7.5 YR 5/6 D) yellowish red (5 YR 5/6 M); sandy loam; weak medium subangular blocky to granular slightly hard; friable; slightly sticky non plastic; very few medium and fine roots; common fine and very fine, very few medium pores; rapid permeability; clear smooth boundary; pH 7.2.
A ₁₂	11 - 26	Red (2.5 YR 4/6 D) dark red (2.5 YR 3/6 M); sandy loam; weak medium subangular blocky; hard, slightly firm, sticky and plastic; few irregular quartz gravels upto 3cm diameter; very few fine and very fine roots; very few coarse fine pores; moderately rapid permeability; clear smooth boundary; pH 6.7.
A ₁₃	26 - 48	Dark red (2.5 YR 3/6 D & M); very gravelly clay loam; moderate medium subangular blocky, slightly hard, slightly firm, very sticky and plastic; very frequent small and large quartz gravels; few fine and very fine roots; few coarse and medium pores; moderately rapid permeability; gradual wavy boundary; pH 6.5.
C	48 - 66+	Gravel mixed with soil.

Potentials and limitations of Irugur soil series :

<i>Potentials</i>	<i>Limitations</i>
- Moderately deep to deep	- Sandy clay to clay in sub surface
- Fine loamy texture	- Well drained
- Gently sloping	- Low water holding capacity
- Moderately rapid permeability	- Low organic matter
- High cation exchange capacity	- Moderate sheet erosion
- Neutral reaction	
- Free from salinity	
- Non calcareousness	

IRUGUR (Igr) SOIL SERIES



KALUGUR (Kur) SOIL SERIES

Brief description	:	Dark greyish brown to greyish brown moderately deep to deep - fine loamy calcareous moderately drained soils
Physiography	:	Tamilnadu inland plain - undulating upland
Drainage	:	Moderately drained
Taxonomy	:	Fine loamy mixed isomegathermic calcareous deep Typic Ustropepts
Typifying pedon	:	Kalugur-sandy clay loam cultivated

Profile description

Horizon	Depth (cm)	Description
A _p	0 - 14	Dark greyish brown (10 YR 4/2 M); sandy clay loam; moderate to medium subangular blocky; slightly firm, slightly sticky and slightly plastic; many medium roots; slight effervescence; moderately rapid permeability; clear smooth boundary; pH 8.5.
B ₁	14 - 36	Dark greyish brown (10 YR 4/2 M); sandy clay loam; moderate medium subangular blocky; slightly firm; slightly sticky and slightly plastic; many coarse and medium roots; many medium to coarse pores; moderately rapid permeability; clear smooth boundary; pH 8.0.
B _w	36 - 68	Greyish brown (10 YR 5/2 M); clay loam; moderate to medium subangular blocky; firm, sticky and plastic; many medium roots; many medium to coarse pores; moderately slow permeability; clear smooth boundary; pH 8.6.
Cca	68+	Weathered gneiss + CaCO ₃

Potentials and limitations of Kalugur soil series

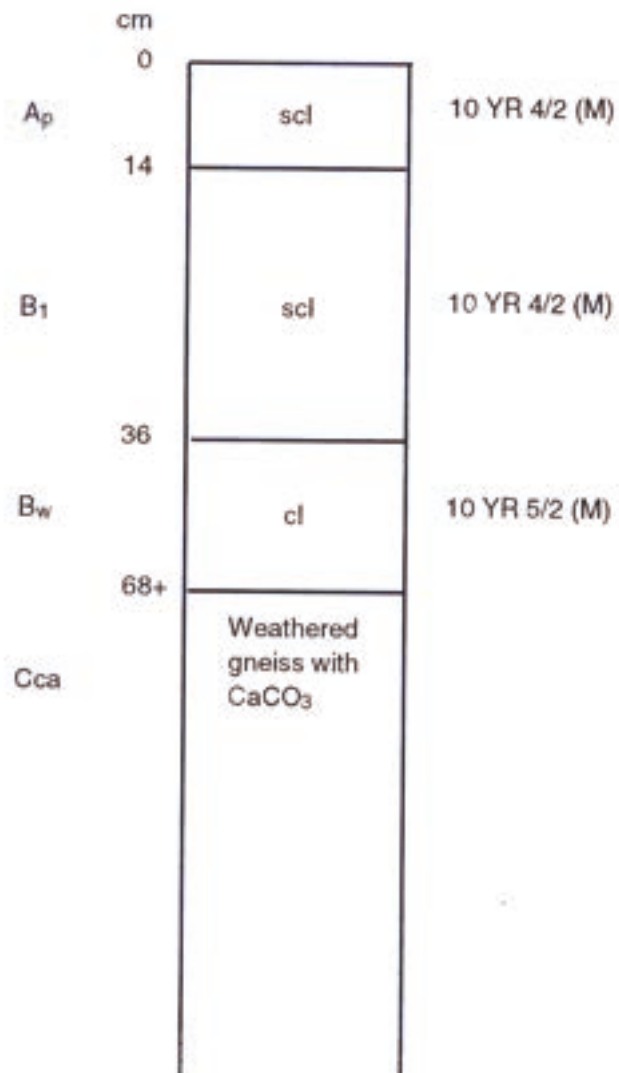
Potentials

- Deep soil
- Loamy textured
- Moderate permeability
- High water holding capacity
- High organic matter
- Free from salinity

Limitations

- Moderately deep
- Low cation exchange capacity
- Moderate to strongly alkaline reaction
- Calcareousness

KALUGUR (Kur) SOIL SERIES



PALATHURAI (Pth) SOIL SERIES

Brief description	:	Dark red to dark brown, moderately deep to deep, fine loamy soils occurring on very gently sloping lands.
Physiography	:	Tamilnadu inland plain - undulating upland
Drainage	:	Moderately well drained
Taxonomy	:	Coarse loamy, kaolinitic, isomegathemic, calcareous, deep Ultic Haplustalf
Typifying pedon	:	Palathurai-loamy sand - cultivated

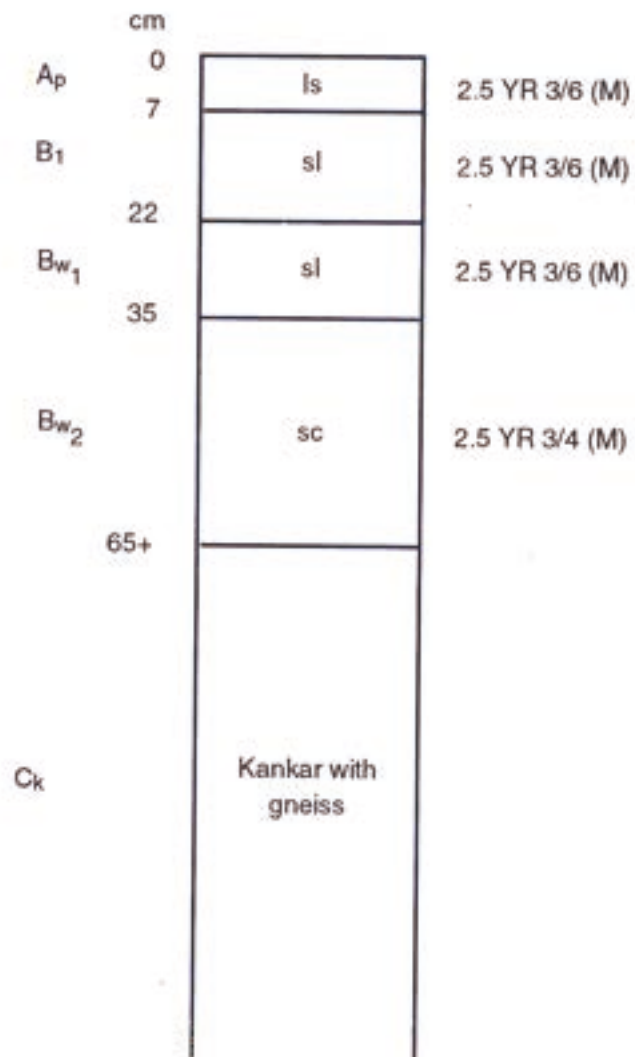
Profile description

Horizon	Depth (cm)	Description
A _p	0 - 7	Dark red (2.5 YR 3/6 M); loamy sand; moderate, medium, granular; loose, friable, non sticky, non plastic; common medium pores; very few, medium roots; slight effervescence; moderately rapid permeability; clear smooth boundary; pH 7.9.
B ₁	7 - 22	Dark red (2.5 YR 3/6 M); sandy loam; moderate, medium subangular blocky; loose friable, slightly sticky; very few very fine roots; common coarse pores; slight effervescence; moderate permeability; clear smooth boundary; pH 7.7.
B _{w1}	22 - 35	Dark red (2.5 YR 3/6 M); sandy loam; moderate, medium subangular blocky; slightly friable, slightly sticky; very few very fine roots; many coarse pores; slight effervescence; moderately rapid permeability; clear smooth boundary; pH 7.9.
B _{w2}	35 - 65	Dark reddish brown (2.5 YR 3/4 M); sandy clay; moderate, medium subangular blocky; firm, slightly plastic, few round to irregular conca; common coarse pores; very few very fine roots; violent effervescence; moderate permeability; clear wavy boundary; pH 8.0.
C _k	65+	Ƙankar with gneiss.

Potentials and limitations of Palathurai soil series :

<i>Potentials</i>	<i>Limitations</i>
- Moderately deep	- Moderately rapid permeability
- Loamy textured	- Moderately well drained
- Gently sloping	- Medium water holding capacity
- Medium cation exchange capacity	- Mildly alkaline reaction
- Neutral reaction	- Calcareousness
- Free from salinity	- Slight to moderate sheet erosion

PALATHURAI (Pth) SOIL SERIES



PALAVIDUTHI (Pvd) SOIL SERIES

Brief Description	:	Red to dark reddish brown, very deep fine loamy slightly acid to neutral, well drained soil
Physiography	:	Tamilnadu plain - gently sloping land form
Drainage	:	Well drained
Taxonomy	:	Fine loamy kaolinitic, isomegathemic deep Typic Rhodustalfs
Typifying pedon	:	Palaviduthi loamy sand-cultivated

Profile	Description
Horizon	Depth (cm)

Description

A _p	0 - 20	Dark brown (7.5 YR 4/4 D) reddish brown (5 YR 4/4 M); loamy sand; weak, medium granular; loose, friable; many medium and coarse pores; many coarse roots; moderately rapid permeability; clear smooth boundary; pH 6.1.
B ₁	20 - 39	Reddish brown (2.5 YR 4/4 D) dark reddish brown (2.5 YR 3/4 M); sandy clay loam moderate medium subangular blocky; hard, slightly firm, slightly plastic; many medium pores; many medium roots; rapid permeability; clear smooth boundary; pH 6.1.
B _{t1}	39 - 83	Dark reddish brown (2.5 YR 3/4 M); sandy clay loam; strong coarse subangular blocky; slightly firm, slightly sticky and slightly plastic; many medium pores; few fine roots; thin patchy clay cutans; very few small iron concretions; moderately rapid permeability; clear smooth boundary; pH 6.3.
B _{t2}	83 - 102+	Dark reddish brown (2.5 YR 3/4 M); sandy clay loam; moderate medium subangular blocky; slightly firm, slightly sticky and slightly plastic; thin patchy clay films; few round iron concretions; many medium and few fine roots; moderately rapid permeability; pH 6.3.

Potential and limitation of Palaviduthi soil series :

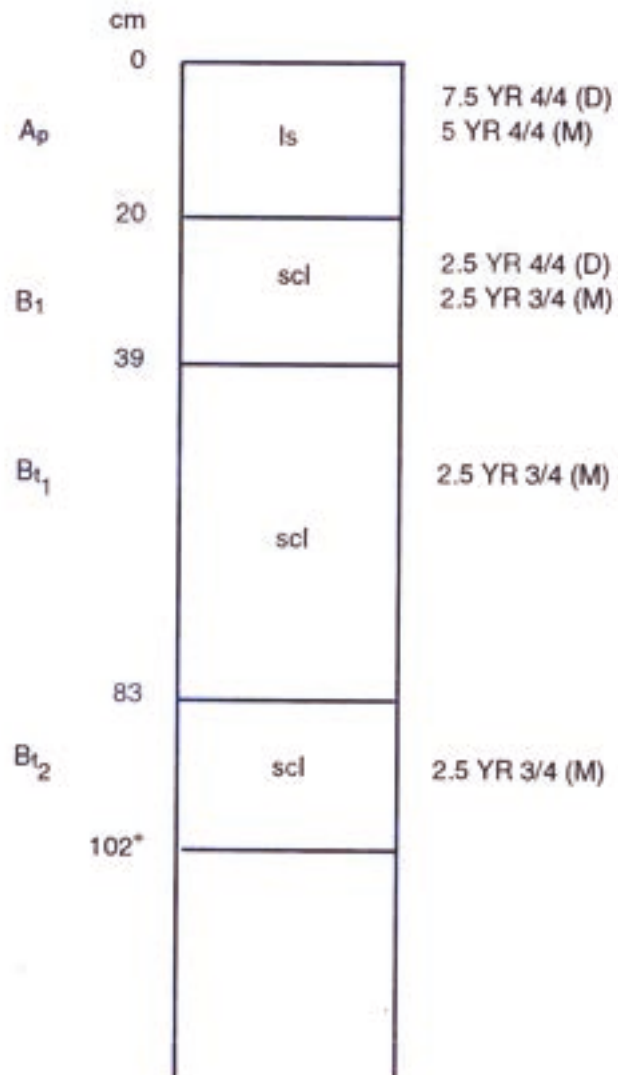
Potentials

- Very deep
- Clay loam to clay in sub surface
- Very gently sloping
- Moderate permeability
- High cation exchange capacity
- Neutral reaction
- Free from salinity

Limitations

- Sandy loam to sandy clay loam in surface
- Moderately well drained
- Low organic matter
- Slightly acidic reaction
- Calcareousness
- Moderate to severe sheet erosion

PALAVIDUTHI (Pvd) SOIL SERIES



PALLADAM (Pld) SOIL SERIES

Brief description	:	Dark brown, shallow, coarse loamy, calcareous mildly alkaline, well drained soils
Physiography	:	Tamilnadu inland plain - undulating upland
Drainage	:	Well drained
Taxonomy	:	Coarse loamy, mixed, isomegathermic, calcareous shallow Typic Ustropepts
Typifying pedon	:	Palladam - sandy loam - cultivated

Profile description

Horizon	Depth (cm)	Description
A ₁	0 - 9	Dark brown (7.5 YR 4/2 D) (7.5 YR 3/2 M); sandy loam; weak medium subangular blocky to granular; slightly hard, friable, slightly sticky non plastic; few round to irregular lime concretions; many medium and very fine roots; violent effervescence; moderately rapid permeability; clear smooth boundary; pH 7.7.
B _w	9 - 23	Dark brown (7.5 YR 3/2 D & M); sandy clay; weak medium subangular blocky; hard, friable very sticky and plastic; few round to irregular lime concretions; many very fine roots; violent effervescence; moderately rapid permeability; abrupt smooth boundary; pH 7.8.
Cca	23+	Lime nodules (laminated) over gneissic materials

Potentials and Limitations of Palladam soil series :

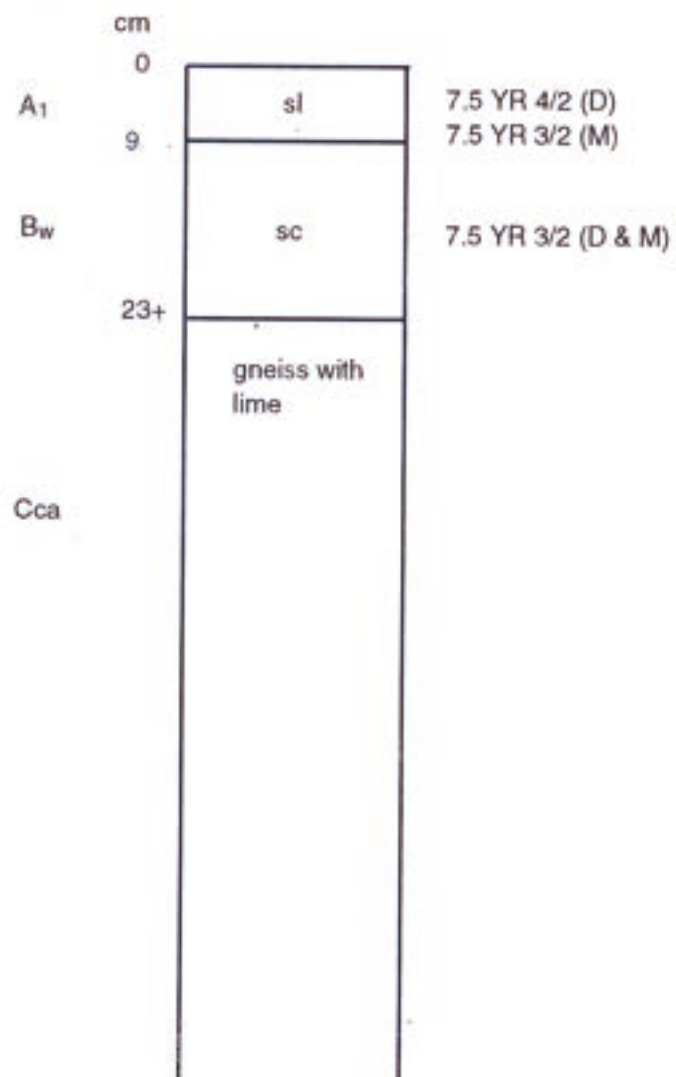
Potentials

- Gently sloping
- Well drained
- High organic matter
- Free from salinity

Limitations

- Shallow
- Coarse loamy in surface
- Moderately rapid permeability
- Low cation exchange capacity
- Mildly alkaline
- Calcareousness
- Moderate to severe erosion

PALLDAM (Pld) SOIL SERIES



PILAMEDU (PIm) SOIL SERIES

Brief description	:	Dark brown to very dark greyish brown, deep to very deep calcareous moderately alkaline soils
Physiography	:	Tamilnadu uplands plain - Flat to very gently sloping land forms
Drainage	:	Moderately well drained
Taxonomy	:	Fine, montmorillonitic, isomegathermic, very deep Typic calciusterts
Typifying pedon	:	Pilamedu-clay-cultivated fallow

Profile description

Horizon	Depth (cm)	Description
A _p	0-13	Dark grey (10 YR 3/1 M); clay; moderate-coarse-subangular blocky; hard, firm, sticky and plastic; small lime concretions; very few irregular quartz bits; few fine and common very fine pores; very few medium and few fine roots; violent effervescence; moderate permeability; clear smooth boundary; pH 8.2.
B ₁	13-32	Very dark grey (10 YR 3/1 M); clay; strong coarse subangular blocky; hard, firm, sticky and plastic; few medium and common fine pores and very fine pores; common fine very few fine roots; very frequent small and irregular concretions; irregular quartz bits; violent effervescence; slow permeability; clear smooth boundary; pH 8.2.
B _{ss1}	32-54	Very dark grey (10 YR 3/1 M); clay; strong coarse subangular blocky; hard, firm, sticky and plastic; common fine and very fine pores; common fine and very fine roots; distinct pressure faces and indistinct slickensides, frequent small irregular lime concretions; violent effervescence; slow permeability; clear smooth boundary; pH 8.3.
B _{ss2}	54-105	Very dark grey (10 YR 3/1 M); clay; moderate coarse, wedge shaped structure; hard, firm, sticky and plastic; few medium and common fine very fine roots; dominant pressure faces and distinct intersecting slickensides; frequent small irregular lime concretions; few small irregular bits; violent effervescence; slow permeability; clear smooth boundary; pH 8.2.
B ₃	105-112	Very dark grey (10 YR 3/1 M); gravelly clay; moderate, coarse subangular blocky, firm, sticky; dominant large powdery lime concretions; few fine and very fine pores; few very fine roots; violent effervescence; slow permeability; abrupt irregular boundary; pH 8.2.
C _k	112+	Gneiss mixed lime.

Potentials and Limitations of Pilamedu soil series :

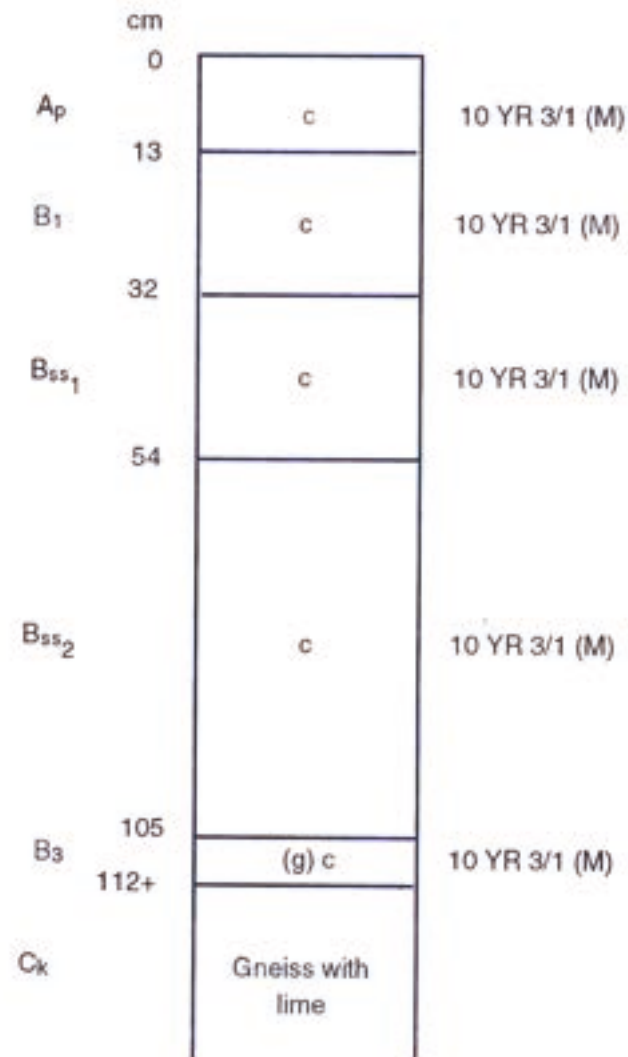
Potentials

- Very deep
- Clay loam to clay
- Very gentle sloping
- High cation exchange and water holding capacities
- High organic matter
- Free from salinity

Limitations

- Clay loam to clay in surface
- Moderately slow permeability
- Moderately well drained
- Mild to moderately alkalinity
- Strongly calcareous
- Severe sheet to gully erosion

PILAMEDU (PIm) SOIL SERIES



SYAMALAGOUNDANPUDUR (Skp) SOIL SERIES

Brief description	:	Yellowish brown, moderately, deep coarse loamy calcareous well drained moderately alkaline soil
Physiography	:	Tamilnadu inland plain - gently sloping land forms
Drainage	:	Well drained
Taxonomy	:	Coarse loamy, mixed isomegathermic, calcareous, deep Typic Ustorhents
Typifying pedon	:	Syamalagoundanpudur - sandy loam cultivated

Profile description

Horizon	Depth (cm)	Description
A ₁₁	0-30	Yellowish brown (10 YR 5/4 D & M); sandy loam; weak, medium, subangular blocky to granular; slightly hard, friable, slightly sticky non plastic; many medium roots; few irregular conca; violent effervescence; clear smooth boundary; pH 7.9.
A ₁₂	30-65	Yellowish brown (10 YR 5/4 D & M); gravelly sandy loam; massive; loose, friable; slightly sticky non plastic; many medium roots; frequent irregular 2.5cm lime concretions; violent effervescence; abrupt smooth boundary; pH 8.0.
Cca	65+	Weathered gneiss inter bedded with calcium carbonate nodules

Potentials and limitations of Syamalagoundanpudur soil series :

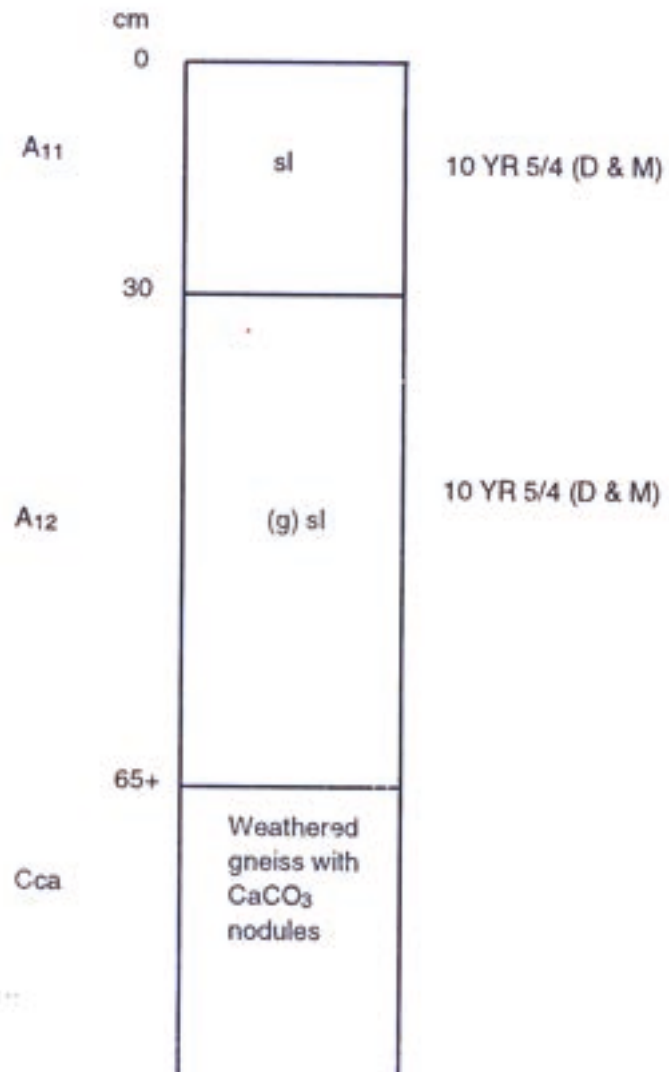
Potentials

- Gently sloping
- Moderately rapid permeability
- Well drained
- Free from salinity
- High organic matter

Limitations

- Moderately deep
- Coarse loamy textured
- Low cation exchange capacity
- Moderately alkaline reaction
- Calcareousness
- Moderate to severe sheet erosion

SYAMALAGOUNDANPUDUR (Skp) SOIL SERIES



TULUKKANUR (TIK) SOIL SERIES

Brief description	:	Reddish brown to dark greyish brown, moderately deep to very deep, fine loamy, calcareous, well drained soils
Physiography	:	Tamilnadu plain - gently sloping land forms
Drainage	:	Well drained
Taxonomy	:	Fine loamy, mixed isomegathemic calcareous deep Typic Haplustalfs
Typifying pedon	:	Tulukkanur - Clay loam - cultivated

Profile Description

Horizon	Depth (cm)	Description
A _p	0 - 29	Dark brown (7.5 YR 4/4 D & M); sandy loam; moderate coarse granular; very hard, friable slightly sticky non plastic; many medium and fine roots; few lime concretions; violent effervescence; rapid permeability; clear smooth boundary; pH 7.6.
B _t	29 - 56	Reddish brown (5 YR 4/4 D & M); sandy clay loam; moderate medium subangular blocky; hard, friable, sticky and slightly plastic; thin patchy clay cutans; strong effervescence; moderate permeability; smooth wavy boundary; pH 7.7.
C _k	56+	Felspathic gneiss with CaCO ₃ .

Potentials and limitations of Tulukkanur soil series :

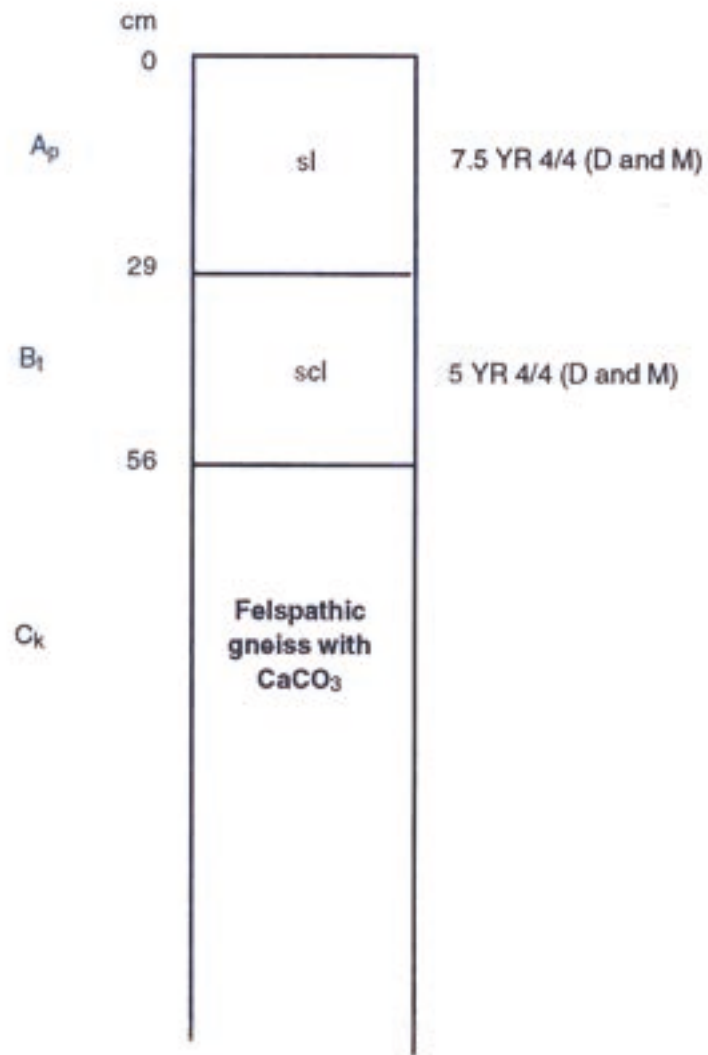
Potentials

- Deep to very deep
- Fine textured
- Gently sloping
- Moderately rapid permeability
- High water holding capacity
- Medium cation exchange capacity
- High organic matter
- Neutral reaction
- Free from salinity

Limitations

- Well drained
- Moderate alkalinity
- Calcareousness
- Moderate to severe erosion

TULUKKANUR (TIK) SERIES



VANNAPATTI (Vpt) SOIL SERIES

Brief description	:	Reddish brown to red, moderately deep, coarse loamy non calcareous, well drained, neutral soils
Physiography	:	Tamilnadu plain - very gently sloping land form of undulating topography
Drainage	:	Well drained
Taxonomy	:	Coarse loamy, mixed, isomegathemic moderately deep Typic Ustorthents
Typifying pedon	:	Vannapatti loamy sand-cultivated

Profile description :

Horizon	Depth (cm)	Description
A ₁₁	0-20	Dark brown (7.5 YR 4/4 D) reddish brown (5 YR 3/4 M); loamy sand; massive, slightly hard, friable, many medium roots; moderately rapid permeability; abrupt smooth boundary; pH 7.4.
A ₁₂	20-43	Dark red (2.5 YR 3/6 D & M); gravelly silty loam; moderate medium subangular blocky; very hard, friable, slightly sticky and slightly plastic; many medium and fine roots; moderate permeability; diffused boundary.
C	43+	Weathered biotite gneiss

Potentials and limitations of Vannapatti soil series :

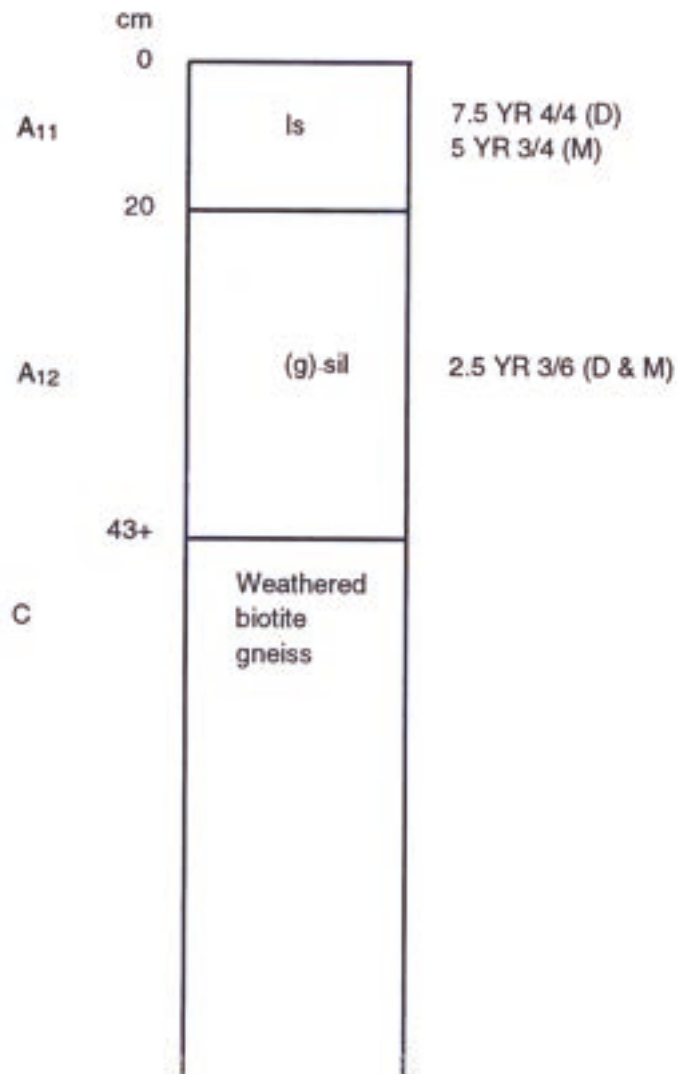
Potentials

- Coarse loamy textured
- Very gently sloping
- Moderately rapid permeability
- Well drained
- Neutral reaction
- Free from salinity
- Non-calcareousness

Limitations

- Moderately deep
- Low water holding capacity
- Low cation exchange capacity
- Low organic matter
- Sheet erosion

VANNAPATTI (Vpt) SOIL SERIES



LAND CAPABILITY CLASSIFICATION

KARUR DISTRICT

The land capability system is a grouping of kinds of soils without regard to location or to the economic characteristics of land. It is defined as a systematic arrangement of different kinds of land according to the 1) inherent soil characteristics (nature of parent material, colour, texture, structure of soil, type of clay mineral, consistence, permeability, soil reaction and root distribution). 2) external land features (slope, erosion, stoniness, degree of wetness, hard clay pan, salinity or alkalinity etc., and 3) environmental (climate) factors.

The grouping of soils into capability classes is primarily done on the basis of their capability to produce common cultivated crops and pastures without deterioration over a long period of time.

The system of classification has three categories viz. class, sub-class and units. Land capability classes are broader groups of soils according to potentialities and degree of broad limitations for agricultural use. Capability sub-classes are grouping of soils according to the kind of limitation or problem that have, for long time use. Capability units include soils having similar response to soil and water management, crop adaptations and yields and risks and limitations for agricultural use. Capability units include soils having similar response to soil and water management, crop adaptations and yields and risks and limitations for agricultural use.

The land capability classes are designated by Roman numerals I to VIII. The sub-classes (limitations) like, soils (s), wetness (w), climate (c) and erosion (e) are shown by suffixing small letters to the land capability classes. The progressive increase of Roman numerals indicate greater limitation and narrow down the practical agricultural uses. This enables to get a picture of hazards of the soil which cause soil damage, deterioration in fertility and its potentiality for production. From this, all limitations are grouped. By suitable measures limitations can be controlled and a soil with higher cropping potential is developed.

In Karur district, Adhanur, Irugur, Tulukkanur and Pilamedu soil series are severely affected by soil limitation which cover an extent of 1,89,758 (65.54%) hectares. Syamalagoundanpudur, Palladam, Vannapatti and Kalugur soil series which occupy 35,240 (12.17%) hectares of land are very severely affected by soil limitations. These soil needs suitable soil improvements.

Sl. No.	Land Capability Class, Sub class	Soil series	Extent (ha)	Percent to total	Limitations	Special needs	
1	II e -	Lands that have moderate limitations for sustained use under agriculture	Palathurai and Palaviduthi	22,266	7.68	Erosion and run off Soil limitation (Alkalinity sandy texture)	Soil conservation
	II s -	Lands that have moderate limitations for sustained use under agriculture	Mixed Alluvium	10,231	3.53		Soil reclamation and textural improvement
2	III s -	Lands that have severe limitations for sustained use under agriculture	Adhanur	3,497	1.21	Soil limitation (alkalinity)	Soil reclamation
	III es-	Lands that have severe limitations for sustained use under agriculture	Irugur Tulukkanur and Pilamedu	1,86,261	64.33	Soil limitations (Erosion, alkalinity etc.,)	Soil conservation Soil reclamation and textural improvement
	IV es-	Lands that have very severe limitations for sustained use under agriculture	Syamalagoundanpudur Palladam Vannapatti and Kalugur	35,240	12.17	Soil limitations (Erosion, alkalinity, rapid permeability)	Soil conservation Soil reclamation and textural improvement
			Others	25,875	8.94	—	
		Forest	6,187	2.14	—		
		Total	2,89,557	100.00			

CLASS

- II** Lands that have moderate limitations for sustained use under agriculture
- III** Lands that have severe limitations for sustained use under agriculture
- IV** Land that have very severe limitations for sustained use under agriculture

Sub-class

- e** - erosion and runoff
- w** - wetness
- s** - soil limitations

LAND IRRIGABILITY CLASSIFICATION

KARUR DISTRICT

Water is like a double edged knife. If used judiciously, large benefits can be derived. If not, it brings in the twin evils of water-logging and salt problem. Efficient use of water for sustained irrigation under agriculture, necessitates thorough knowledge of the soil characteristics that controls intake, storage and drainage of water and land characteristics that determine topographic feasibility of water transport and redevelopment operations. Thus this classification is combined effect and reciprocal influence of the soil and the land characteristics.

Land irrigability classification is defined as an interpretative grouping based on soil and land characteristics to indicate relative suitability of land for irrigation and predicted behaviour of soil under irrigation. In land irrigability classification, the soils are first grouped into soil irrigability classes according to their limitations, irrespective of their location and size of the individual areas.

For working out irrigability classes land features (topography, slope, water-table and drainage) and soil characteristics (depth, texture, permeability, water holding capacity, salinity, alkalinity and erosion) are considered. The land irrigability classes are denoted by the numbers from 1 to 6. Limitations are increasing with progressive advancement of numbers.

For sub-classes the numbers are suffixed with small letters showing the limitations like topography (t), soil (s), and drainage (d).

In Karur district, Palathurai, Palaviduthi and Mixed Alluvium soil series which spread over in 32,497 (11.21%) hectares are moderately affected by irrigability limitations. Adhanur, Kalugur, Pilamedu, Irugur, Tulukkanur, Syamalagoundanpudur and Vannapatti soil series covering an extent of 2,24,998 (77.71%) hectares are very severely affected by irrigability limitations.

Sl. No.	Land Capability Class (LCC)	Soil series	Extent (ha)	Percent to total	Limitations
1	2 d - Lands that have moderate limitations for sustained use under irrigation	Mixed Alluvium	10,231	3.53	Drainage
	2 t - Lands that have moderate limitations for sustained use under irrigation	Palathurai and Palaviduthi	22,266	7.68	Topography
2	3 s - Lands that have severe limitations for sustained use under irrigation	Kalugur	3,378	1.17	Light texture in sub - surface
	3 sd - Lands that have severe limitations for sustained use under irrigation	Adhanur and Pilamedu	6,725	2.32	Heavy textured in surface and drainage.
	3 st - Lands that have severe limitations for sustained use under irrigation	Irugur Tulukkanur Palladam Syamalagoundanpudur and Vannapatti	2,14,895	74.22	Soil and topography
		Others	25,875	8.94	—
		Forest	6,187	2.14	—
		Total	2,89,557	100.00	

Class

- 2** Lands that have moderate limitations for sustained use under irrigation
- 3** Lands that have severe limitation for sustained use under irrigation

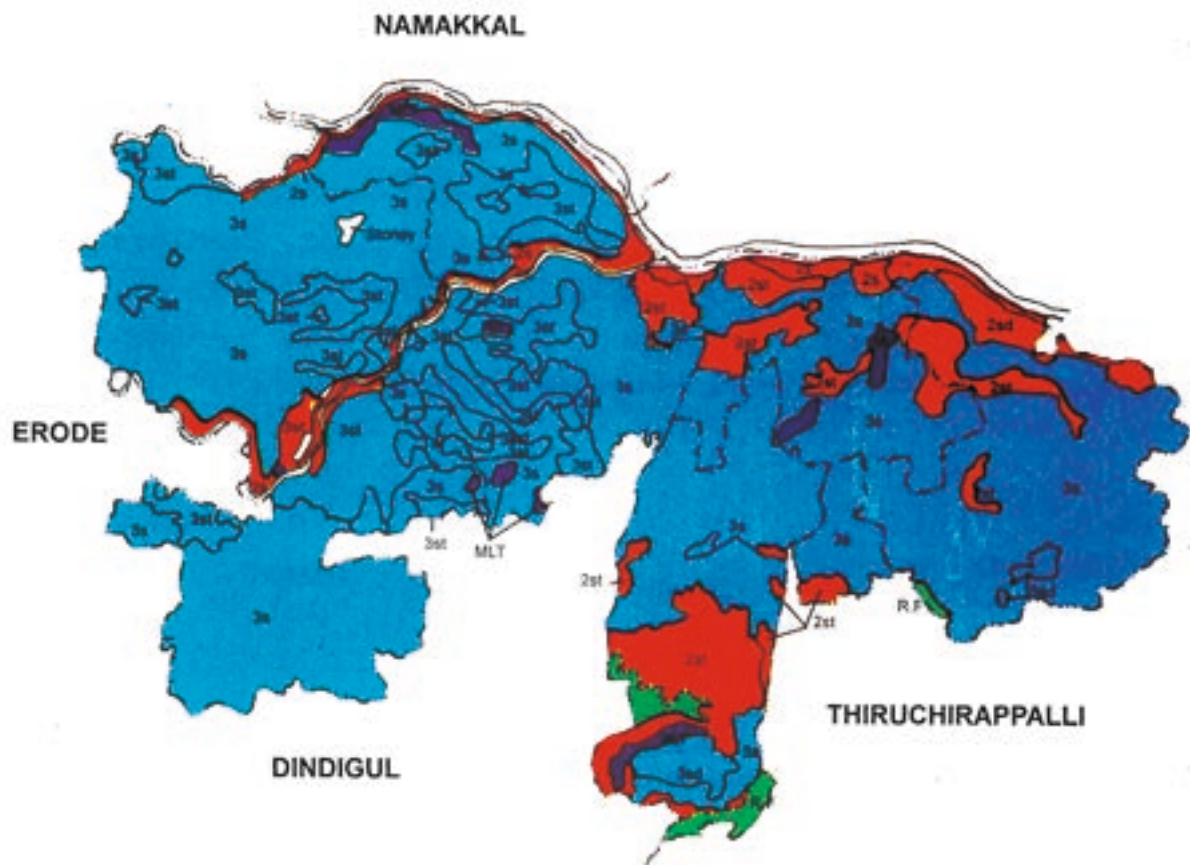
Sub class

- s** - soil problem
- t** - topography
- d** - drainage







LAND IRRIGABILITY

KARUR DISTRICT

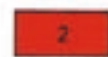



REFERENCE

-  District boundary
-  Taluk boundary
-  Forest boundary
-  River

LEGEND

CLASS

-  2 MODERATE LIMITATION
-  3 SEVERE LIMITATION

SUB CLASS

- s - SOIL LIMITATION
- t - TOPOGRAPHY LIMITATION
- d - DRAINAGE LIMITATION

SOIL PRODUCTIVITY

KARUR DISTRICT

Productivity is the capability of soils to produce a certain amount of crop yield per unit area and is a function of intrinsic properties of soil firstly as described in the soil profile *in situ* in the field and secondly by the laboratory analysis. For determining the present productivity as proposed by Riquier *et al* (1970), moisture, drainage, effective depth, texture, structure, base saturation, soluble salt concentration, organic matter content, exchange capacity and mineral reserves are considered.

Productivity ratings can be increased by all possible soil improvements like provision of irrigation facilities, building up of the depth of soil, fertilizing and amending, organic matter enriching, erosion control etc.,

Based on productivity ratings, five productivity classes viz., Excellent, Good, Average, Poor and Extremely poor are recognised by Riquier *et al* (1970).

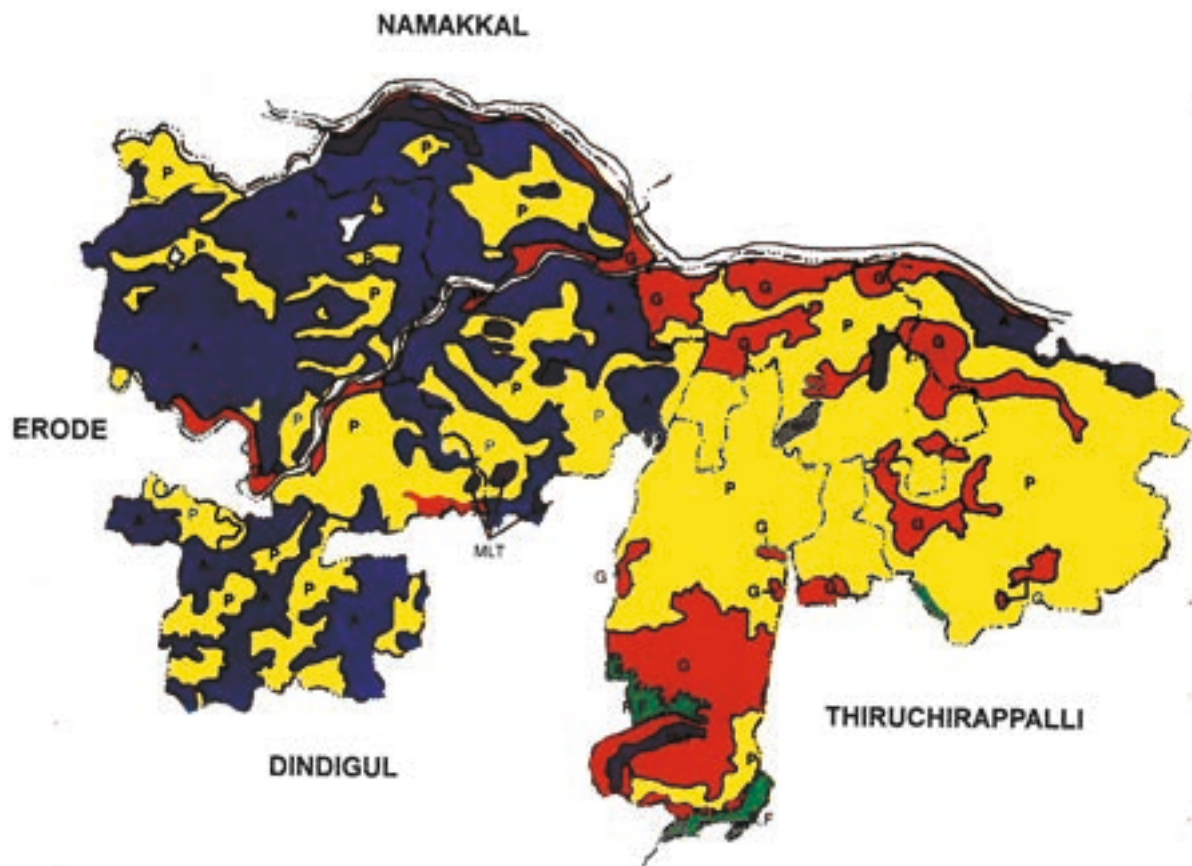
In Karur district, out of the total geographical extent of 2,89,557 hectares, 39103 (13.50%) hectares of land is under good productivity groupings and 1,24,647 (43.04%) hectares are with poor productivity.

Sl. No.	Productivity Class		Soil Series	Extent (ha)	Percent to total
	Ratings	Groupings			
1.	8 - 19	Poor (P)	Irugur, Palladam, Syamalagoundanpudur and Vannapatti	1,24,647	43.04
3.	20 - 34	Average (A)	Adhanur and Tulukkanur	93,745	32.38
4	35-64	Good (G)	Mixed Alluvium, Kalugur, Palathurai, Palaviduthi and Pilamedu	39,103	13.50
			Others	25,875	8.94
			Forests	6,187	2.14
			Total	2,89,557	100.00




SOIL PRODUCTIVITY





KARUR DISTRICT



LEGEND

	POOR (P)
	AVERAGE (A)
	GOOD (G)
	MLT

REFERENCE

	District boundary
	Taluk boundary
	Forest boundary
	River

CROPS GROWN

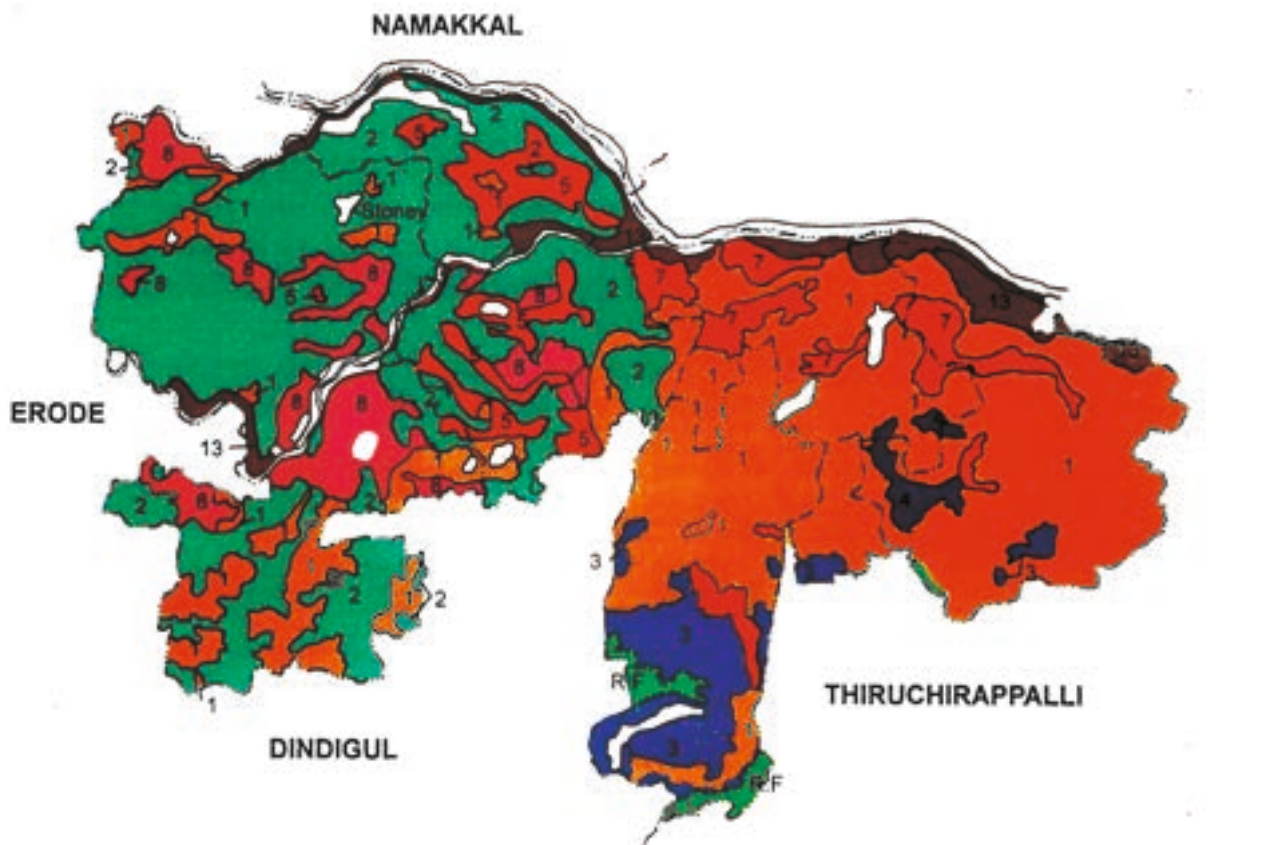
KARUR DISTRICT

In Karur district, the major crops grown are rice, banana, sugarcane, millets and pulses.


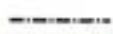


Sl.No.	Crops Grown		Map symbol	Soil series
	Irrigated	Rainfed		
1.	Rice, Banana and Sugarcane	Groundnut, Millets and Pulses	1	Irugur
2.	Flowers, Rice and Vegetables	Millets and Pulses	2	Mixed Alluvium and Tulukkanur
3.	Groundnut, Onion, Rice, Sugarcane and Tapioca	Chillies, Coriander, Cotton, Gingelly, Groundnut, Millets and Redgram	3	Palaviduthi and Pilamedu
4.	Cotton, Groundnut, Millets and Rice	Gingelly, Groundnut, Millets and Redgram	4	Kalugur
5.	Chillies and Rice	Chillies, Groundnut, Millets and Rice	5	Vayalogam












CROPS GROWN KARUR DISTRICT



REFERENCE

-  District boundary
-  Taluk boundary
-  Forest boundary
-  River

LEGEND

- | | | | |
|---|---|---|-----|
|  | 1 |  | 7 |
|  | 2 |  | 8 |
|  | 3 |  | 13 |
|  | 4 |  | MLT |
|  | 5 | | |

SOIL COLOUR

KARUR DISTRICT

Colour is the most obvious and easily determined of soil characteristics. Although it has little direct influence on the functioning of the soil, one may infer a great deal about a soil from its colour if considered with the other observable features. Thus the significance of soil colour is almost entirely an indirect measure of other more important characteristics or qualities that are not so easily and accurately observed. Colour is one of the most useful and important characteristics for soil identification, especially when combined with soil structure.

Colour of a soil may be inherited from its parent material (mineral matter). Red soils developed from red sand stone. The variation in soil colour are mainly due to the organic matter content which generally imparts black to dark grey tinges. Red, yellow or brown colour of soils are related with oxidation, hydration and diffusion of iron oxides in mineral matters of soil. The soil colour influences soil temperature. The dark coloured soils absorb more heat than light coloured soils. The black colour may be due to decomposed organic matter, impeded drainage, or sodium saturation of colloidal complex. The soil colours are best determined by comparison with Munsell colour chart.

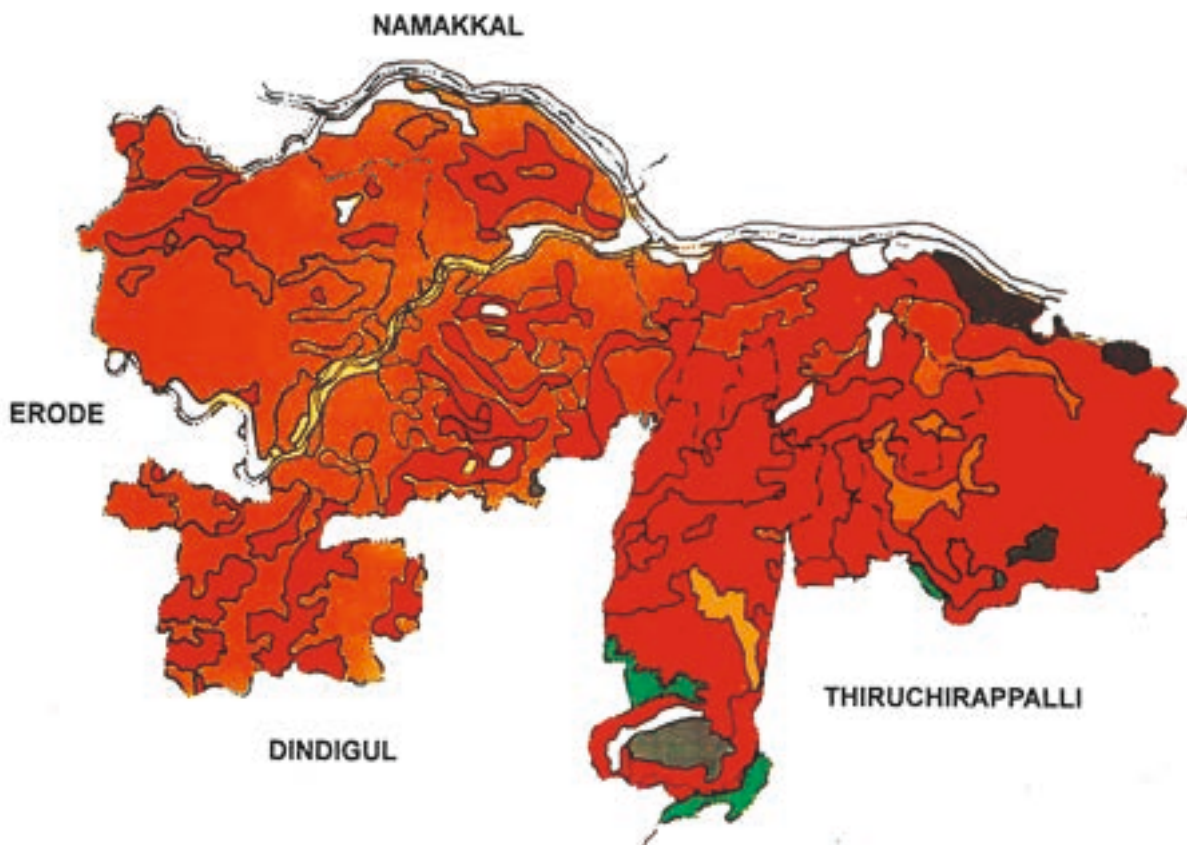
In Karur district, 1,35,479 (46.79%) hectares of land with brown coloured soils, 1,15,291 (39.82%) are with red coloured soils out of the total geographical extent of 2,89,557 hectares.

Soil Colour	Soil series	Extent (ha)	Percent to total
Red	Irugur, Palaviduthi and Vannapatti	1,15,291	39.82
Brown	Kalugur, Palathurai, Palladam, Syamalagoundanpudur, Tulukkanur and Mixed Alluvium	1,35,479	46.79
Grey	Adhanur and Pilamedu	6,725	2.32
	Others	25,875	8.93
	Forest	6187	2.14
	Total	2,89,557	100.00



SOIL COLOUR

KARUR DISTRICT



LEGEND

	RED
	BROWN
	GREY
	FOREST

EFFECTIVE SOIL DEPTH

KARUR DISTRICT

Effective soil depth refers to the depth of solum. The depth of solum is restricted by parent material and hard pans, water table, erosion, salinity, alkalinity etc., Eroded soils have poor depth. Plant growth is generally influenced by the depth of the soil. Root penetration, type of cultivar or plant to be grown are directly linked with solum depth.

In deep soils, roots can penetrate to greater depths to meet their moisture and nutrient requirements. Shallow or moderately deep soils are not suitable for deep rooted crops because they reduce the well development of forages. Unfavourable factors like soil texture, landscape in combination with depth, decrease the capacity of soils.

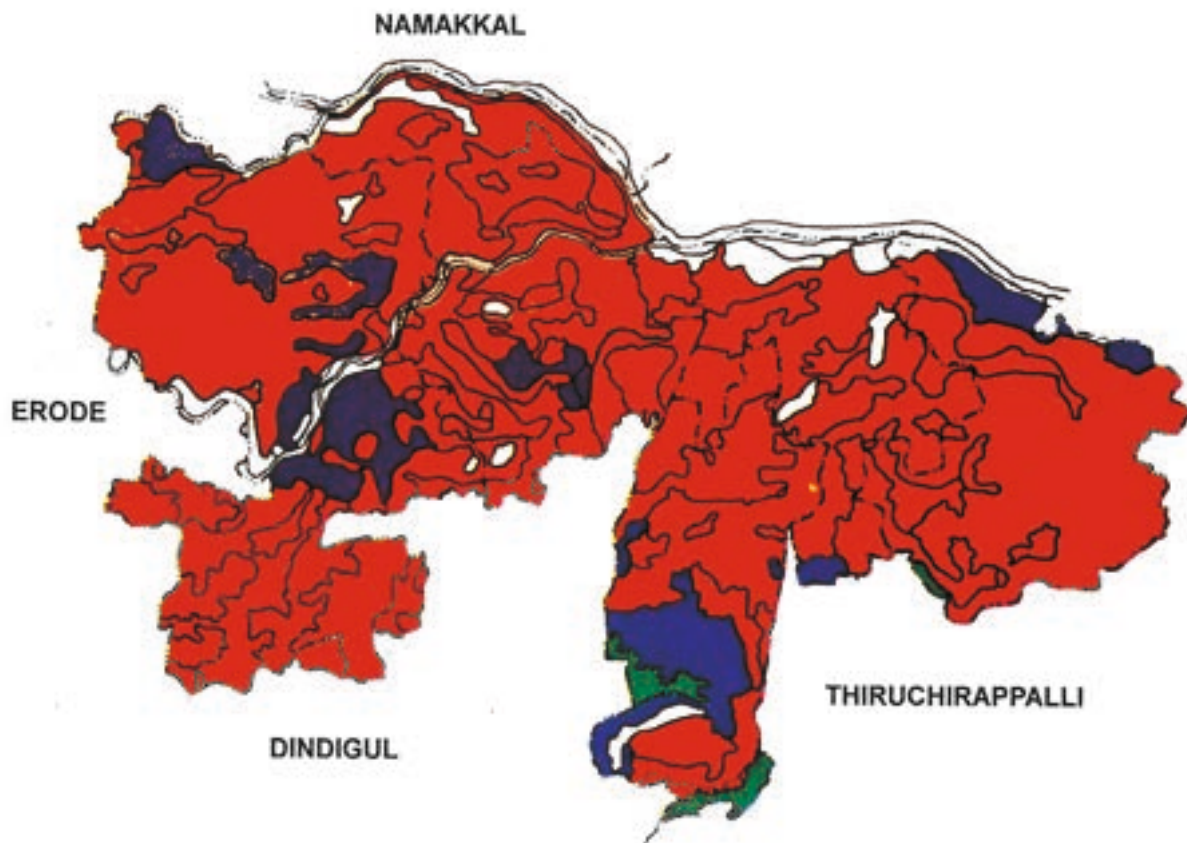
In Karur district 23,787 (8.22%) hectares are with very deep soils which spread over in Adhanur and Palaviduthi soil series. Irugur, Palathurai, Syamalagoundanpudur, Tulukkanur and Vannapatti soil series are with moderately deep soil which occupy an extent of 2,10,890 (72.83%) hectares.

Effective soil depth	Soil series	Extent (ha)	Percent to total
Shallow (d ₂ - 10 to 25cm)	Palladam	16,212	5.60
Moderately deep (d ₃ - 25 to 50cm)	Irugur, Palathurai, Syamalagoundanpudur, Tulukkanur and Vannapatti	2,10,890	72.83
Deep (d ₄ - 50 to 100cm)	Kalugur and Pilamedu	6,606	2.28
Very deep (d ₅ - above 100cm)	Adhanur and Palaviduthi	23,787	8.22
	Others	25,875	8.93
	Forest	6,187	2.14
	Total	2,89,557	100.00



EFFECTIVE SOIL DEPTH

KARUR DISTRICT



LEGEND

	SHALLOW
	MODERATE DEEP
	DEEP
	VERY DEEP
	FOREST

SOIL TEXTURE

KARUR DISTRICT

Texture is the basic indicator of physical and chemical properties of soils. Soil texture indicates the coarseness or fineness of the soils as determined by the relative proportion of the various sized primary particles in the soil mass. It is one of the fundamental and permanent characteristics that has direct bearing on structure, porosity, adhesion and consistency. Texture of the soil influences drainage, aeration, tillage, root penetration, moisture and nutrient retention, choice of crops, physico-chemical and biological activities. Soils with heavy texture or soils with marked textural changes in profile are more susceptible to salinisation and have drainage and reclamation problems. Also, soil compaction below plough layer will be common restricting the root proliferation.

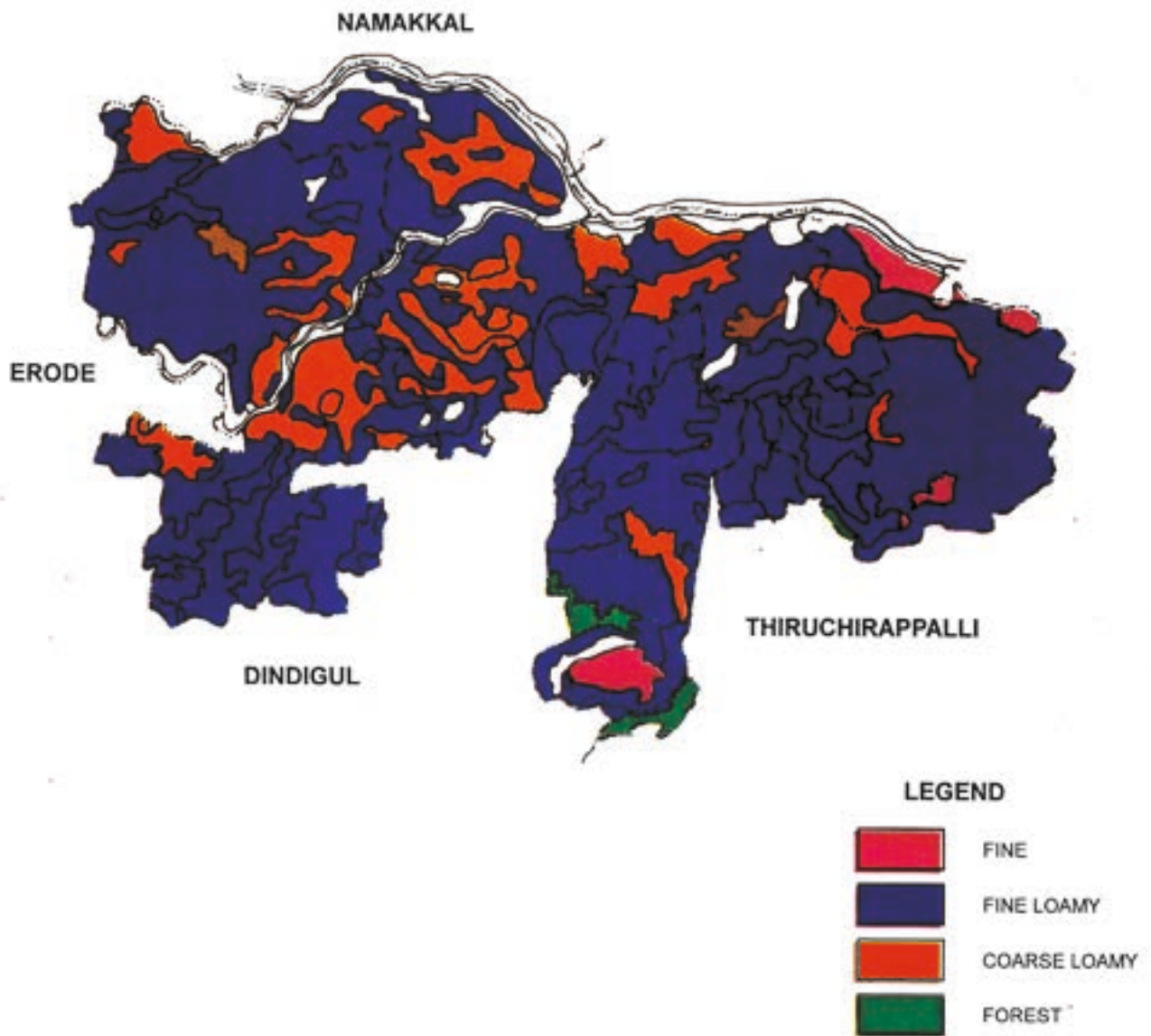
In Karur district, Irugur, Kalugur, Palaviduthi, Tulukkanur and Mixed Alluvium soil series are with fine loamy soil, which occupy an extent of 2,06,701 (71.39%) hectares. Pilamedu and Adhanur soil series, covering an extent of 6,725 (2.32%) of soil are with fine textured soil.

Textural class	Soil series	Extent (ha)	Percent to total
Fine (soils with high clay content)	Adhanur and Pilamedu	6,725	2.32
Fine loamy (soils with moderate clay content)	Irugur Kalugur Palaviduthi, Tulukkanur and Mixed Alluvium	2,06,701	71.39
Coarse loamy (open textured)	Palathurai, Palladam, Syamalagoundanpudur, and Vannapatti	44,069	15.22
	Others	25,875	8.93
	Forest	6,187	2.14
	Total	2,89,557	100.00



SOIL TEXTURE

KARUR DISTRICT



PERMEABILITY

KARUR DISTRICT

The characteristics of a soil that enables water or air or plant roots to move through, is known as Permeability. The permeability is dependant on the pore size distribution in the soil. Permeability usually decreases with depth, as the sub-soil layers are more compact. Compactness reduces macropores. Permeability decreases with increasing fine texture. Permeability increases with coarseness of soil texture. Concentration and composition of salts dissolved in irrigation water affect permeability of the soil.

The permeability can be controlled to a larger extent by suitable management practices. Continuous tillage reduces permeability while the growth of deep rooted crops like legumes increase permeability. Maintenance of good aggregation is important in maintaining the permeability, which inturn increase the productivity of the soil. Very fine particles (less than 2 microns) have slow permeability which block air movement.

In sands and strongly aggregated soils, permeability is rapid. The degrees of permeability vary with soil series. The range of rate of intake for determining the various permeability classes of different soil series are indicated below.

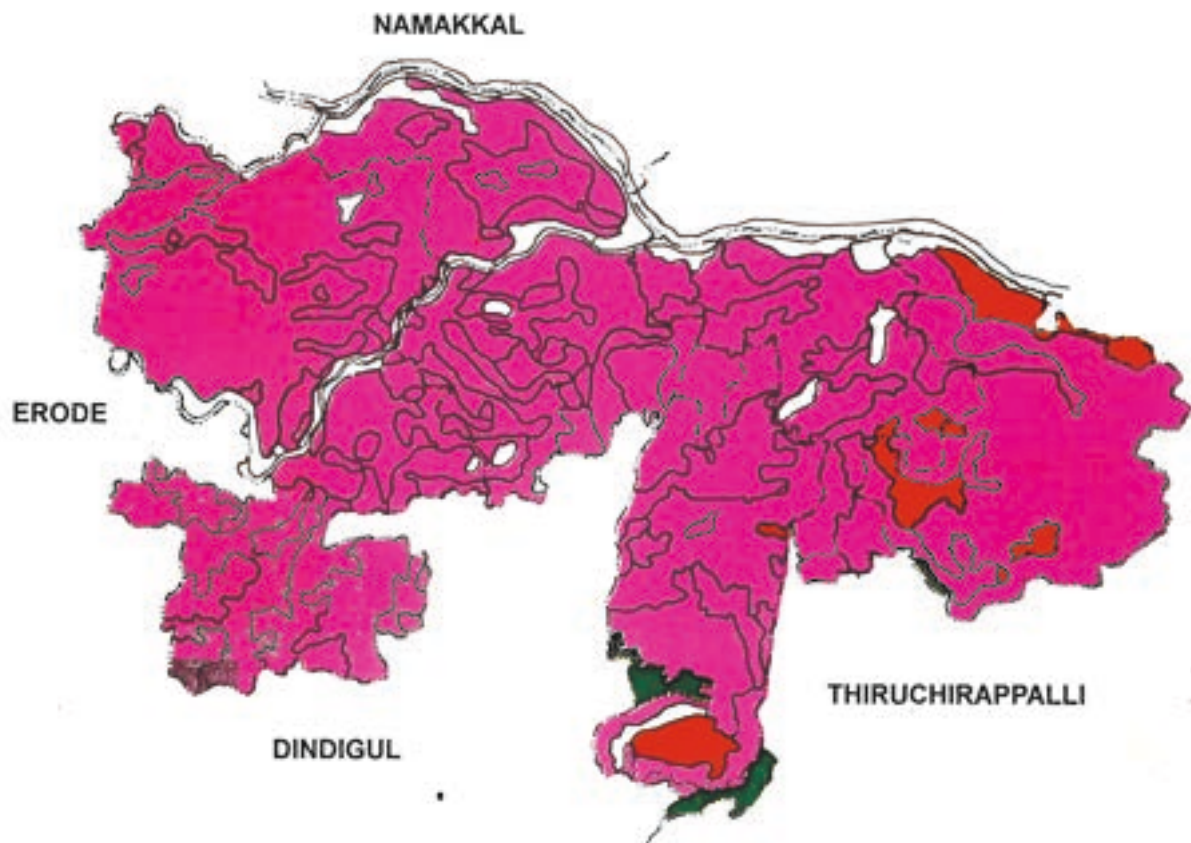
Irugur, Palladam, Palaviduthi, Palathurai, Syamalagoundanpudur, Tulukkanur, Vannapatti and Mixed Alluvium soil series are moderately rapid (MR), covering an extent of 2,47,392 (85.44%) hectares.

Class	Soil series	Extent (ha)	Percent to total
Moderately slow (MS)	Adhanur Kalugur and Pilamedu	10,103	3.49
Moderately Rapid (MR)	Irugur, Palladam, Palathurai, Palaviduthi, Syamalagoundanpudur, Tulukkanur, Vannapatti and Mixed Alluvium	2,47,392	85.44
	Others	25,875	8.93
	Forest	6187	2.14
	Total	2,89,557	100.00



PERMEABILITY

KARUR DISTRICT



LEGEND

-  MODERATELY SLOW
-  MODERATELY RAPID
-  FOREST

WATER HOLDING CAPACITY (WHC)

KARUR DISTRICT

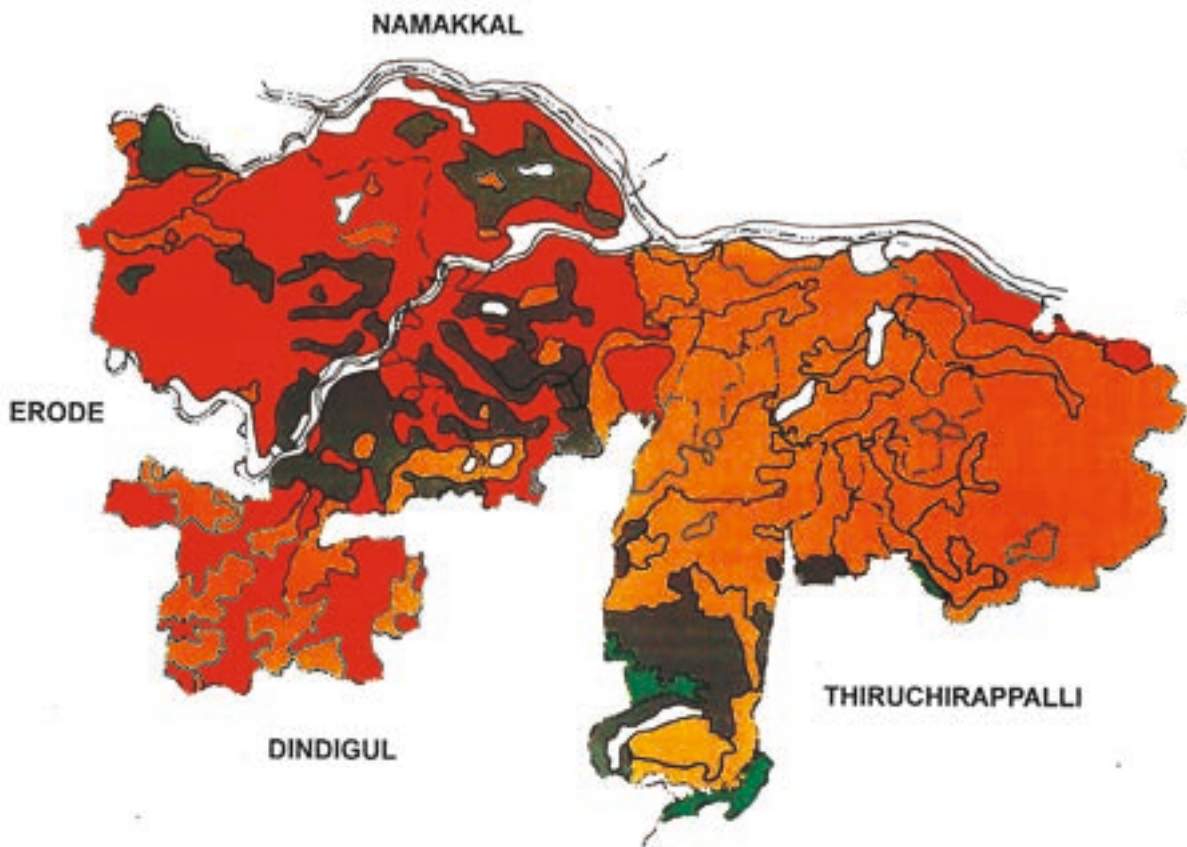
Water holding capacity is required for the determination of depth and frequency of irrigation required. It indirectly shows the potential rooting depth of soil. It depends upon texture, permeability, drainage, capillary rise, soil temperature etc., Clayey soils have high water holding capacity as against the sandy type of soil with low water holding capacity.

In Karur district, Irugur, Kalugur, Palathurai, Pilamedu, Syamalagoundanpudur and Mixed Alluvium soil series are having medium water holding capacity which cover an extent of 1,25,032 (43.18%) hectares. Adhanur and Tulukkanur soil series are with high water holding capacity, occupying in 93,745 (32.38%) hectares.



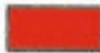

Water holding capacity category	Soil series	Extent (ha)	Percent to total
Low (Up to 20%)	Palladam, Palaviduthi and Vannappatti	38,718	13.37
Medium(21-50%)	Irugur, Kalugur, Palathurai, Pilamedu, Syamalagoundanpudur and Mixed Alluvium	1,25,032	43.18
High (>50%)	Adhanur and Tulukkanur	93,745	32.38
	Others	25,875	8.93
	Forest	6137	2.14
	Total	2,89,557	100.00

WATER HOLDING CAPACITY

KARUR DISTRICT



LEGEND

	LOW
	MEDIUM
	HIGH
	FOREST

EROSION

KARUR DISTRICT

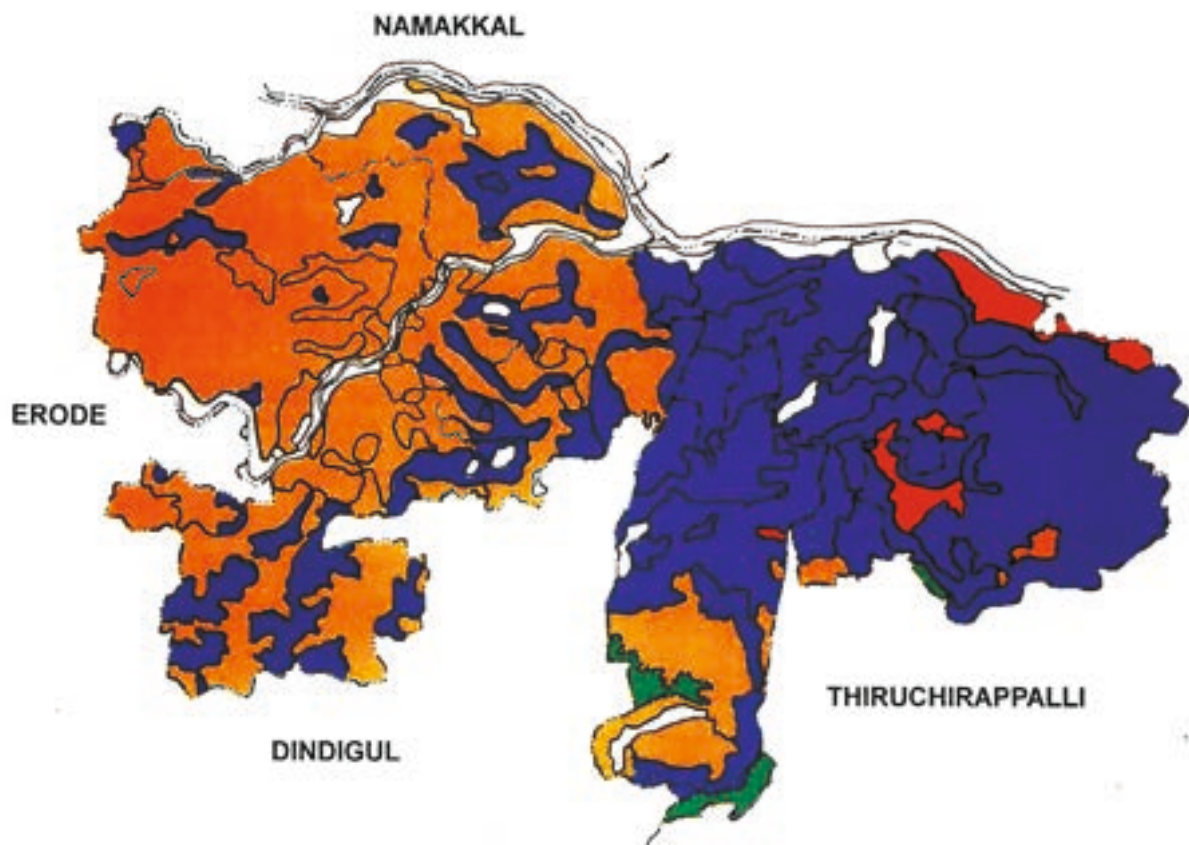
Erosion is the detachment and movement of soil material. The process may be natural or accelerated by human activity. Natural erosion has sculptured land forms on the uplands and built land forms on the low lands. This type of removal of soil is by water or wind. Accelerated erosion is the consequence of human activity. The primary causes are tillage, grazing and cutting of timber. Light texture of the surface soil, unchecked surface water flow, topography, low-water holding capacity are the prime reasons for erosion. Erosion causes depletion of fertility through removal of valuable surface soil and lead to reduction in the effective arable soil depth and hence it is one of the limiting factors for crop production. Erosion reduces soil depth and anchorage will be a problem in these soils.

In this district, Palladam, Palaviduthi, Pilamedu, Syamalagoundanpudur and Tulukkanur soil series are severely affected by erosion, which cover an extent of 1,22,950 (42.46%) hectares. But Adhanur, Kalugur and Mixed Alluvium soil series are not affected by erosion, occupying an extent of 17,106 (5.91%) hectares.

Erosion type	Soil series	Extent (ha)	Percent to total
Slight / no erosion (e ₁)	Adhanur, Kalugur and Mixed Alluvium	17,106	5.91
Moderate (e ₂)	Irugur, Palathurai and Vannapatti	1,17,439	40.56
Severe (e ₃)	Palladam, Palaviduthi, Pilamedu, Syamalagondanpudur and Tulukkanur	1,22,950	42.46
	Others	25,875	8.93
	Forest	6,187	2.14
	Total	2,89,557	100.00



SOIL EROSION KARUR DISTRICT



LEGEND

- | | |
|---|---------------------|
|  | SLIGHT - NO EROSION |
|  | MODERATE |
|  | SEVERE |
|  | FOREST |

CALCAREOUSNESS

KARUR DISTRICT

A high carbonate level either due to underground water or soil solution may cause calcium deficiency by calcium precipitation as calcium carbonate. The insoluble calcium carbonate present in the soil surface or sub-surface or both is referred as calcareousness. The insoluble calcium carbonate is present in the form of concretions, powdery beds etc.,

The nutritional problems encountered by calcareousness are :

- Volatilisation loss of nitrogen
- Mineralisation and denitrification of nitrogen
- Phosphorus fixation
- Potassium and Magnesium antagonism
- Micronutrient deficiency especially zinc, iron, manganese and boron
- Moderate alkalinity in surface or sub-surface or both
- Quick decomposition of organic matter, releasing more nitrate nitrogen but lost by leaching or denitrification.
- 'N' added in the form of Ammonium and amide might be subjected to loss.

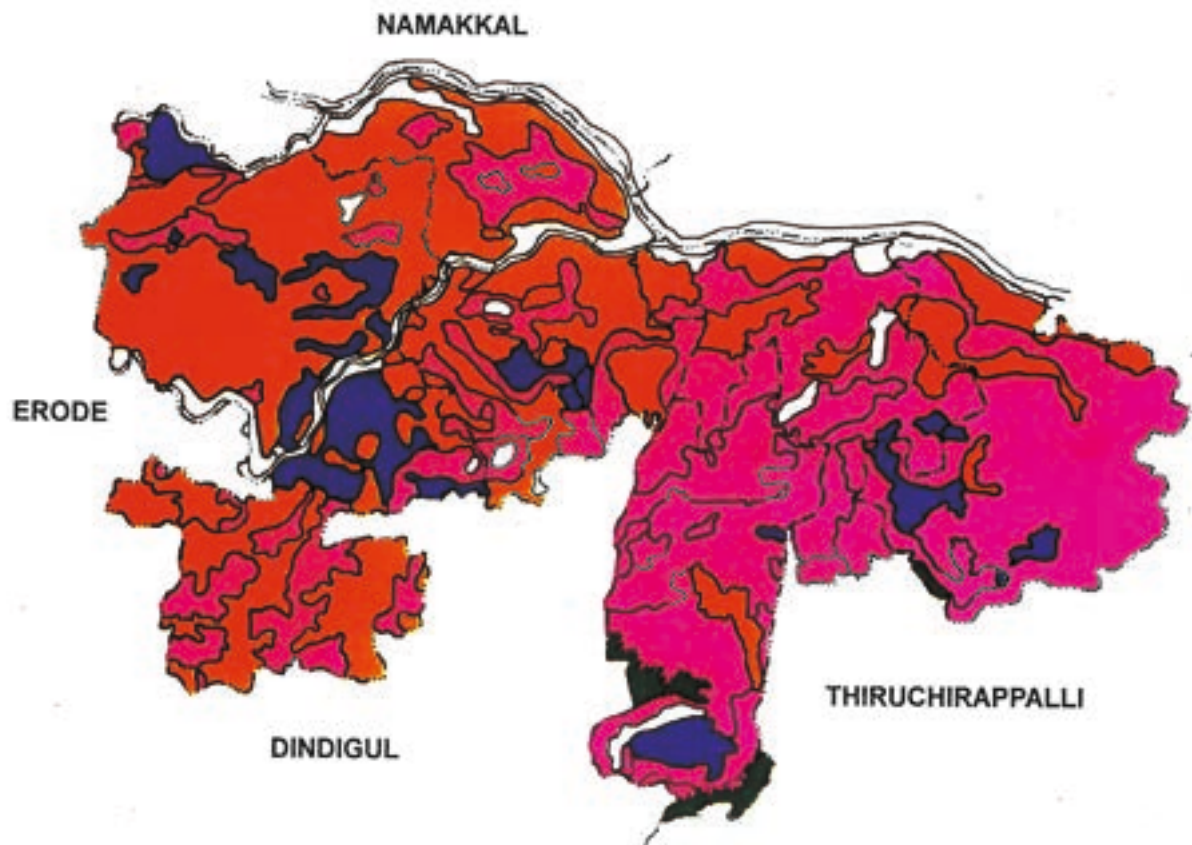
In Karur district, Kalugur, Palladam and Pilamedu soil series are strongly affected by calcareousness covering an extent of 22,818 (7.88%) hectares. Non-calcareousness was observed in Irugur, Palaviduthi, Vannapatti and Mixed Alluvium, occupying an extent of 1,25,522 (43.35%) hectares.

Calcareousness class	Soil series	Extent (ha)	Percent to total
Non-Calcareousness	Irugur, Palaviduthi, Vannapatti and Mixed Alluvium	1,25,522	43.35
Mild	Adhanur, Palathurai, Syamalagoundanpudur and Tulukkanur	1,09,155	37.70
Strong	Kalugur, Palladam and Pilamedu	22,818	7.88
	Others	25,875	8.93
	Forest	6,187	2.14
	Total	2,89,557	100.00



CALCAREOUSNESS

KARUR DISTRICT



LEGEND

	NIL
	MILD
	STRONG
	FOREST

SALINITY

KARUR DISTRICT

All soils contain some amount of soluble salts, but when their concentration increases beyond a specific limit, the plant growth is affected adversely and the soils are termed as salinity affected. Salinity is measured in terms of Electrical conductivity ($m.mhos/cm^2$) which indicates the total quantities of soluble salts in soils.

The salts may have originated directly from chemical weathering of rocks and have been dissolved by surface and percolating waters. The favourable conditions for formation of saline soils are 1) a high water table with a fairly high salt concentration 2) a high temperature and a low rainfall

Under irrigation, saline soils have developed by the following means 1) when excessive application of water have raised the groundwater level sufficiently to permit concentration of salts from saline ground water through evaporation 2) when irrigation water has a high salt content 3) poor drainage keeps the salt in the surface soil and prevent leaching of salts and 4) flooding of soil followed by intense drought, and water supply is limited, leave the salts in the root zone, saline soils may be of two kinds 1) soil in which soluble salts contain calcium and magnesium 2) soils in which soluble salts are chiefly sodium.

- Adverse effects :
- 1) Excess salts hinder crop growth not only by toxicity but also by reducing water availability through reverse osmosis.
 - 2) Nutrient up take will become unbalanced and alter hormonal imbalance in plant system.
 - 3) Yield of crop decreases linearly with increase of salinity.

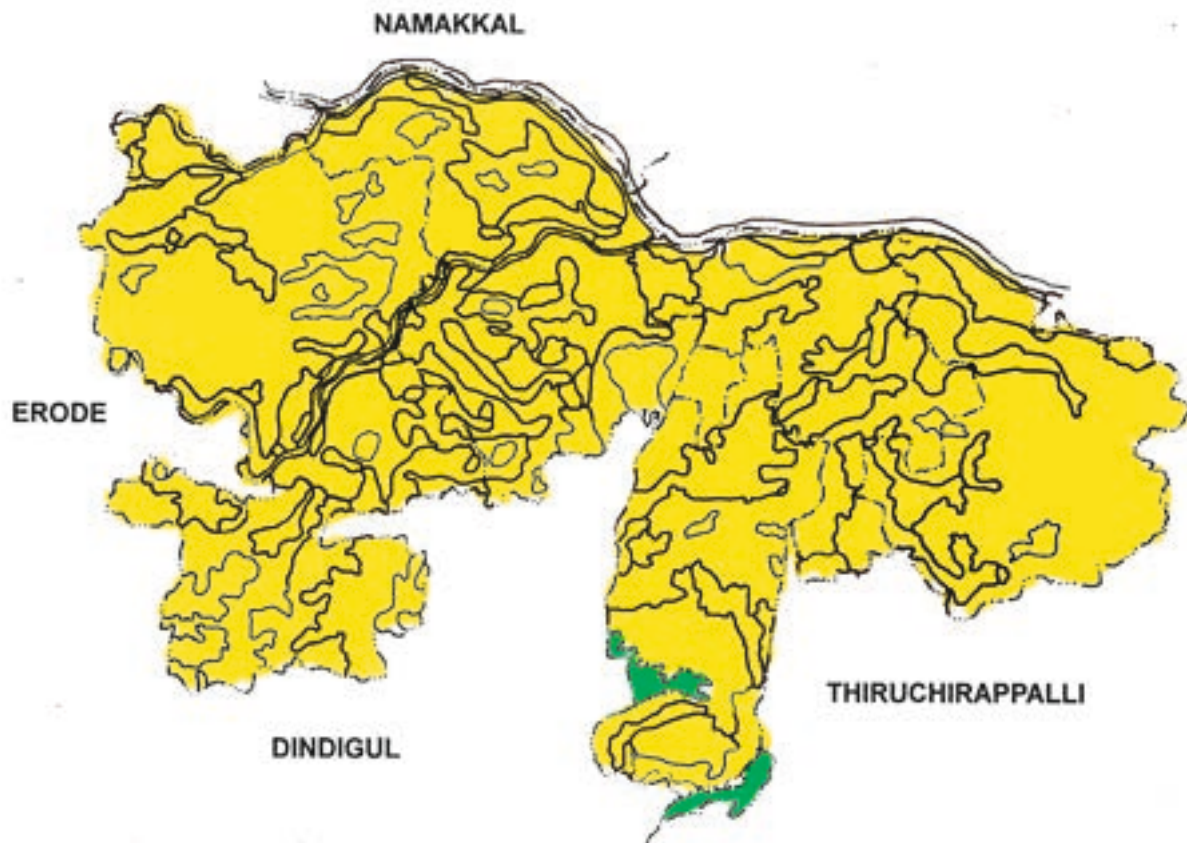
In Karur district, out of the total geographical extent of 2,89,557 hectares, 2,57,495 (88.93%) hectares of soils are non- saline.

Category	Soil series	Extent (ha)	Percent to total
Non-saline	Adhanur, Kalugur, Irugur, Palathurai, Palladam, Pilamedu, Palaviduthi, Syamalagoundanpudur, Tulukkanur, Vannapatti and Mixed Alluvium	2,57,495	88.93
	Others	25,875	8.93
	Forest	6,187	2.14
	Total	2,89,557	100.00



SALINITY

KARUR DISTRICT



LEGEND

NO SALINE

This district has no Salinity

SOIL REACTION (pH)

KARUR DISTRICT

Soil reaction is an important chemical characteristics influencing many physical and chemical properties. Microbial activity and plant nutrients and uptake and its close relationship to other soil constituents availability depend upon soil reaction (Acidic, neutral or alkaline). The intensity of acidity or alkalinity is expressed in pH. Neutral soils have a pH of 7.0; lower values indicate acidity; and higher values show alkalinity. Acid soils are high in exchangeable hydrogen and alkaline soils, high in exchangeable bases. Soils rich in clay or in organic matter have greater reserves of acidity or alkalinity than sandy soils or those low in organic matter. Soils having pH values higher than 8.5, always contain significant amounts of exchangeable sodium. Plants are partly responsible for differences in soil pH. Some feed very heavily sodium and some on calcium, which on decomposition of their remains tends to keep the soil alkaline or neutral respectively.

- Acid soils requires lime for amelioration
 - Alkaline soil requires organic manuring, gypsum or ironpyrites for amending the soil.
- Soil reaction helps for the selection of suitable crops or varieties.

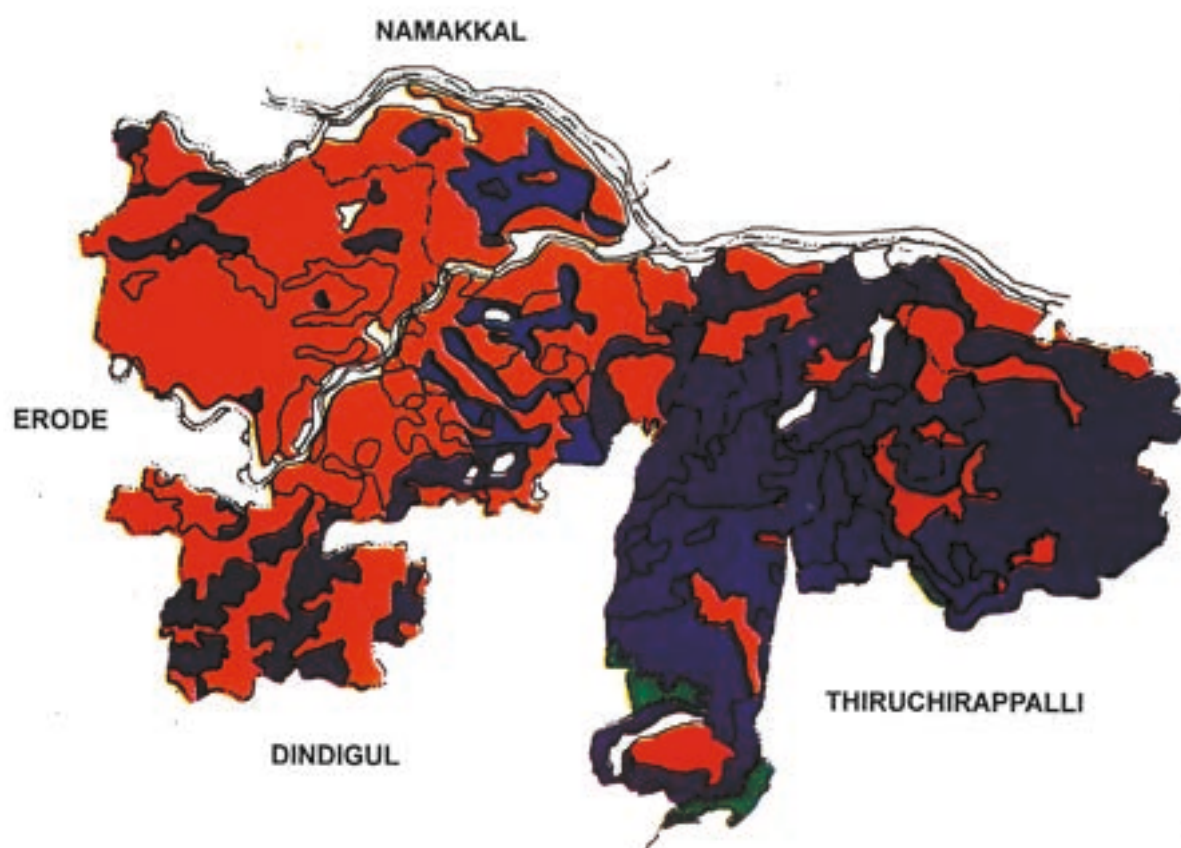
In this district, Vannapatti soil series alone is a neutral soil, which cover an extent of 12,447 (4.30%) hectares. Palaviduthi and Irugur soil series are slightly acidic occupying an extent of 1,02,844 (35.51%) hectares. Slightly alkaline soils were observed in 1,16,691 (40.30%) hectares. These soils need suitable reclamation measures.

Category	Soil series	Extent (ha)	Percent to total
Slightly acid (6.1 - 6.5)	Palaviduthi and Irugur	1,02,844	35.51
Neutral (6.6 - 7.3)	Vannapatti	12,447	4.30
Slightly alkaline (7.4 - 7.8)	Palladam and Tulukkanur Mixed Alluvium	1,16,691	40.30
Moderately alkaline (7.9 - 8.4)	Pilamedu, Palathurai, Syamalagoundanpudur and Adhanur and Kalugur	25,513	8.81
	Others	25,875	8.93
	Forest	6,187	2.14
	Total	2,89,557	100.00



SOIL REACTION

KARUR DISTRICT



LEGEND

-  SLIGHTLY ACIDIC
-  NEUTRAL
-  MILDLY ALKALINE
-  MODERATELY ALKALINE
-  STRONGLY ALKALINE
-  FOREST

CATION-EXCHANGE CAPACITY (CEC)

KARUR DISTRICT

Cation exchange capacity measurements are commonly made as a part of overall assessment of the potential fertility of a soil and possible response to fertilizer application. The clay and organic matter content and mineralogical make up of soils are generally responsible for the overall nutrient retention capacity. Low or poor retention capacity reduces the fertilizer use efficiency especially of Nitrogen and Potassium. Chemical and physical processes in soil are connected with ion exchange and include weathering of minerals, nutrient absorption by plants, swelling and shrinking of clay and leaching of electrolytes. Hence ion exchange is considered as the most important process occurring in the soil. Any soluble nutrients which is not retained in the soil or clay complex will get leached out due to high internal drainage. Soil with low CEC and poor in organic matter suffers from this set back.

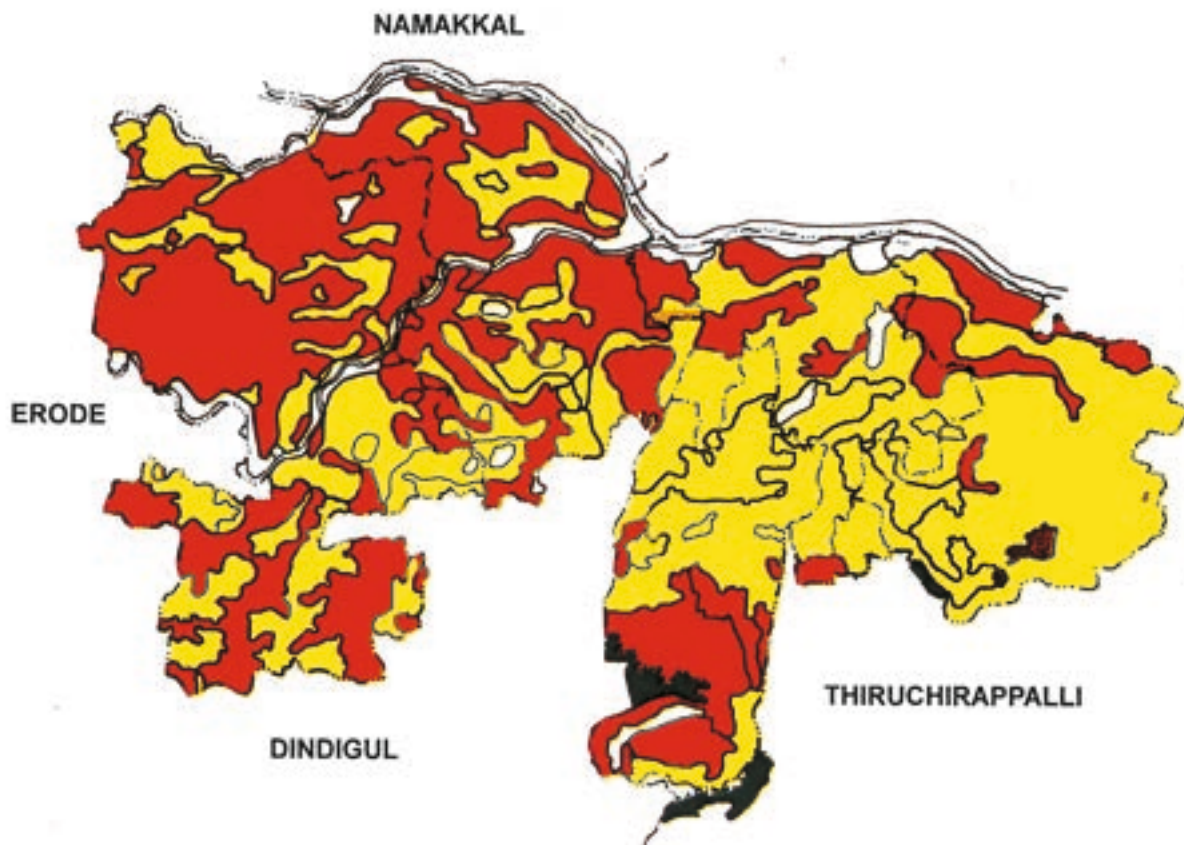
In Karur district, Adhanur and Pilamedu soil series are with high cation exchange capacity, covering an extent of 6,725 (2.32%) hectares. Low cation exchange capacity was observed in Irugur, Kalugur, Palladam, Syamalagoundanpudur and Vannapatti, which occupy an extent of 1,28,025 (44.22%) hectares. These soil require improvement to increase the cation exchange capacity.

CEC Category	Soil series	Extent (ha)	Percent to total
Low (0 - 10 m.eq / 100g)	Irugur, Kalugur, Palladam, Syamalagoundanpudur and Vannapatti	1,28,025	44.22
Medium (10 - 25 m.eq / 100g)	Palathurai, Palaviduthi, Tulukkanur and Mixed Alluvium	1,22,745	42.39
High (> 25 m.eq / 100g)	Adhanur and Pilamedu	6,725	2.32
	Others	25,875	8.93
	Forest	6,187	2.14
	Total	2,89,557	100.00



CATION EXCHANGE CAPACITY

KARUR DISTRICT



LEGEND

- | | |
|---|--------|
|  | LOW |
|  | MEDIUM |
|  | HIGH |
|  | FOREST |

DISTRIBUTION OF SOILS SERIES

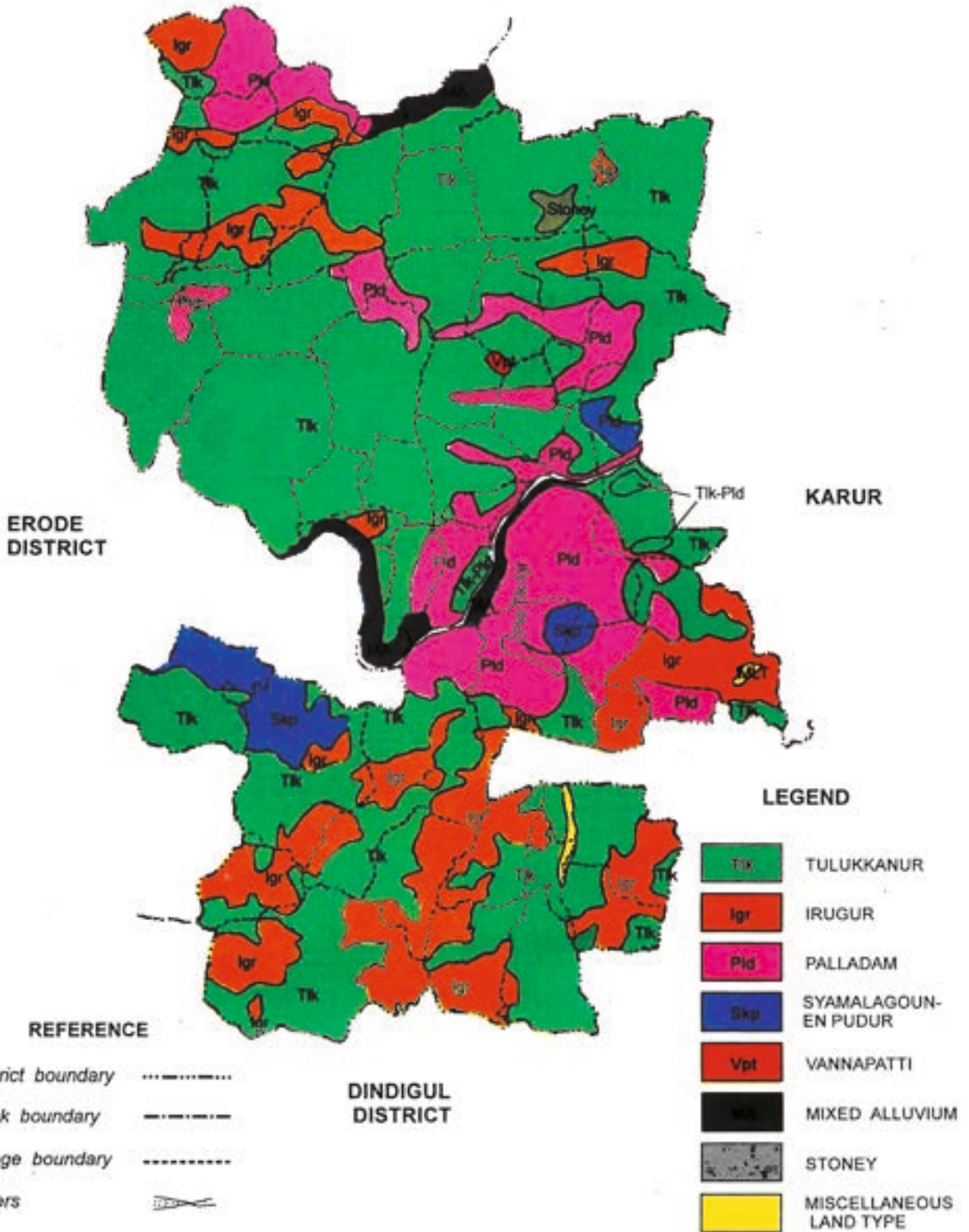
ARAVAKKURICHI TALUK

S.No.	Soil series	Symbol	Extent (ha)	Percent to total
1.	Tulukkanur	Tlk	59,293	60.74
2.	Irugur	Igr	18,786	19.25
3.	Palladam	Pld	13,307	13.63
4.	Syamalagoundanpudur	Skp	2,870	2.94
5.	Mixed Alluvium	MA	978	1.00
6.	Vannapatti	Vpt	65	0.07
7.	Tulukkanur + Palladam	Tlk + Pld	653	0.67
8.	Palladam + Tulukkanur + Irugur	Pld + Tlk + Igr	326	0.33
9.	Miscellaneous Land Type	MLT	326	0.33
10.	Others	—	718	0.74
11.	Forest	—	294	0.30
Total			97,616	100.00



SOILS ARAVAKKURICHI TALUK

THIRUCHIRAPPALLI DISTRICT



VILLAGE WISE DISTRIBUTION OF SOIL SERIES AND FERTILITY INDICES

ARAVAKKURICHI TALUK

Si. No.	Revenue village	Village No.	Distribution of Soil series in Percentage	Fertility Indices (kg/ac)		
				Nitrogen (N)	Phosphorus (P ₂ O ₅)	Potassium (K ₂ O)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Alamarathupatti	44	Igr 65, Tik 35	89	29	180
2.	Ammapatti	49	Igr 50, MLT 35, Tik 15	132	44	245
3.	Anjangoundanpatti	47	Tik 80, Igr 15, MLT 5	85	84	390
4.	Anjore	1	Pld 55, Igr 25, Tik 20	45	50	200
5.	Aravakurichi	34	Tik 60, Pld 30, Igr 10	82	31	195
6.	Ariyur	24	Tik 80, Pld 15, Vpt 5	70	50	310
7.	Athipalayam	5	Tik 55, MA 45	49	43	176
8.	Chinnathapuram	21	Igr 40, Tik 35, MA 25	48	58	340
9.	Elavanur	31	Tik 55, Pld 45	51	48	352
10.	Ellaikattu Ramachandrapuram	17	Tik 80, Igr 10, Pld 10	84	28	174
11.	Erumarpatti	46	Tik 80, Igr 10, MLT 10	90	52	370
12.	Esanatham	48	Tik 60, Igr 35, MLT 10	75	37	345
13.	Gudalur East Bit I	19 B	Tik 50, MA 50	67	24	120
14.	Gudalur East Bit II	19 C	Tik 50, MA 50	67	24	120
15.	Gudalur West	19 A	Tik 50, MA 50	67	24	120

(1)	(2)	(3)	(4)	(5)	(6)	(7)
16.	Inanganur	39	Igr 80, Tik 20	77	29	239
17.	K. Paramathi	12	Tik 90, Pld 10	84	50	396
18.	Karavazhi	2	Pld 75, Tik 15, Igr 10	48	54	213
19.	Karudayambalayam	10	Tik 40, Pld 35, Igr 25	108	9	278
20.	Kodaiyur	28	Tik 60, Pld 10, MA 5, Vpt 5, Tik - Pld	98	48	348
21.	KodandurNorth	18A	Tik 95, Pld 5	85	33	400
22.	Kodandur South	18 B	Tik 95, Pld 5	85	33	400
23.	Kuppam	7	Tik 85, Stones 10 Igr 5	60	32	248
24.	Modakkur East	38 A	Tik 40, Skp 35, Igr 25	101	43	342
25.	Modakkur West	38 B	Tik 40, Skp 35, Igr 25	101	43	342
26.	Monjanur East	16 B	Tik 80, Igr 20	97	38	420
27.	Monjanur West	16 A	Tik 80, Igr 20	97	38	420
28.	Munnur	6	Tik 100	66	29	267
29.	Nadanthai North	13 B	Tik 80, Pld 20	71	19	480
30.	Nadanthai South	13 A	Tik 80, Pld 20	71	19	480
31.	Negampalli	29	Pld 75, MA 15, Tik 5	95	23	227
32.	Nanjiaikalakurichi	30	Tik 45, Pld 40, MA 15	78	52	162
33.	Nedungur	11	Tik 70, Pld 30	73	48	209
34.	P. Anaipalayam	25	Tik 50, Pld 45, Vpt 5	70	40	151
35.	Pallapatti	42	Igr 55, Tik 45	68	28	20

(1)	(2)	(3)	(4)	(5)	(6)	(7)
36.	Pavithram	9	Tlk 50, Pld 30, Igr 20	69	28	298
37.	Periamanjuveli	45	Tlk 95, Igr 5	108	54	274
38.	Pungambadi East	35 B	Pld 45, Skp 20, Pld-Tlk - Igr 15, Tlk 10 Igr 10	105	32	348
39.	Pungambadi West	35 A	Pld 45, Skp 20, Pld-Tlk - Igr 15, Tlk 10 Igr 10	68	24	393
40.	Punjaikalakurichi	23	Tlk 45, Pld 30, Tlk - Pld 25	68	32	288
41.	Punnam	8	Tlk 90, Igr 10	73	19	395
42.	Rajapuram	33	Tlk 30 MA 25 Tlk - Pld 25 MLT 20	100	42	246
43.	Santhapadi	37	Tlk 65, Skp 30, Vpt 5	116	44	187
44.	Sendamangalam East	40 B	Tlk 60, Igr 40	96	28	213
45.	Sendamangalam West	40 A	Tlk 60, Igr 40	96	28	213

(1)	(2)	(3)	(4)	(5)	(6)	(7)
46.	Soodamani	22	Tlk 100	60	40	256
47.	Thennilai East	4	Pld 55, Tlk 45	74	34	370
48.	Thennilai South	14	Tlk 90, Pld 10	101	44	455
49.	Thennilai West	15	Tlk 80, MA 10, Igr 5, Pld 5	109	28	450
50.	Thennilai Venkatapuram	20	Tlk 100	53	64	445
51.	Thethupatti	43	Igr 60, Tlk 40	84	28	120
52.	Thokkupatti	32	Tlk 55, MA 45	78	42	200
53.	Thukkachi	3	Pld 50, Igr 35, Tlk 15	67	24	355
54.	Thumbivadi	26	Tlk 50, Pld 40, MA 10	84	53	395
55.	Velambadi	41	Tlk 55, Igr 45	80	30	114
56.	Venjamankudalur East	36 B	Igr 40, Tlk 20, Pld 20, Vpt 10, MLT 10	78	33	354
57.	Venjamankudalur West	36 A	Igr 40, Tlk 20, Pld 20, Vpt 10 MLT 10	77	30	254
58.	Viswanathapuri	27	Tlk 90, MA 10	79	32	119

LAND CAPABILITY CLASSIFICATION

ARAVAKKURICHI TALUK

S. No.	Land capability class, sub-class	Soil series	Extent (ha)	Percent to total	Soil limitations	Special needs
1.	II - w Lands that have moderate limitations for sustained use under agriculture	Mixed Alluvium	978	1.00	Soil wetness	Cultivation of suitable crops
2.	III-es Lands that have severe limitations for sustained use under agriculture	Irugur Tulukkanur Tulukkanur + Palladam	78,732	80.66	Erosion, depth and texture	Cultivation of suitable crops and soil conservation
3.	IV-es Lands that have very severe limitations for sustained use under agriculture	Palladam Vannapatti Syamala-goundan -pudur Palladam+ Tulukkanur + Irugur	16,568	16.97	Erosion, depth and texture	Pasture and forestry development and soil conservation
		Miscellaneous Land type	326	0.33	—	—
		Others	718	0.74	—	—
		Forest	294	0.30	—	—
Total			97,616	100.00	—	—

Class

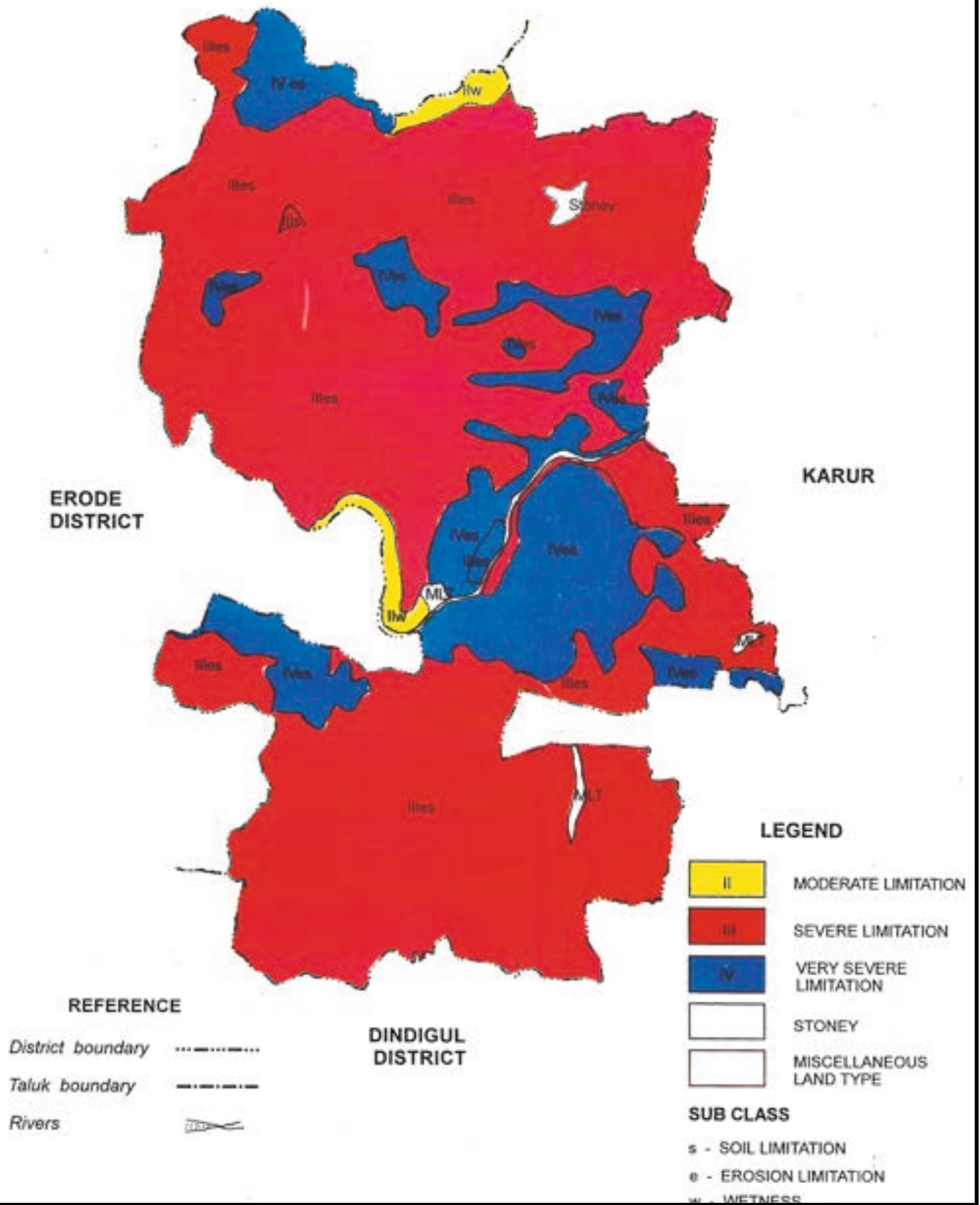
- II** Lands that have moderate limitations for sustained use under agriculture
- III** Lands that have severe limitations for sustained use under agriculture
- IV** Lands that have very severe limitations for sustained use under agriculture

Sub class

- s** - soil
- e** - erosion and run off
- w** - wetness



LAND CAPABILITY ARAVAKKURICHI TALUK



LAND IRRIGABILITY CLASSIFICATION

ARAVAKKURICHI TALUK

S. No.	Land irrigability class, sub-class	Soil series	Extent (ha)	Percent to total	Soil limitations
1.	2 - d Lands that have moderate limitations for sustained use irrigation	Mixed Alluvium	978	1.00	Drainage and permeability
2.	3 - s Lands that have severe limitations for sustained use under irrigation	Irugur, Tulukkanur, Tulukkanur + Palladam	78,732	80.66	Poor depth, light texture and topography
3.	3 - st Lands that have severe limitations for sustained use under irrigation	Palladam, Vannapatti, Syamala -goundan -pudur Palladam+ Tulukkanur + Irrugur	16,568	16.97	Topography, light texture and poor depth
		Miscellaneous Land Type	326	0.33	—
		Others	718	0.74	—
		Forest	294	0.30	—
Total			97,616	100.00	—

Class

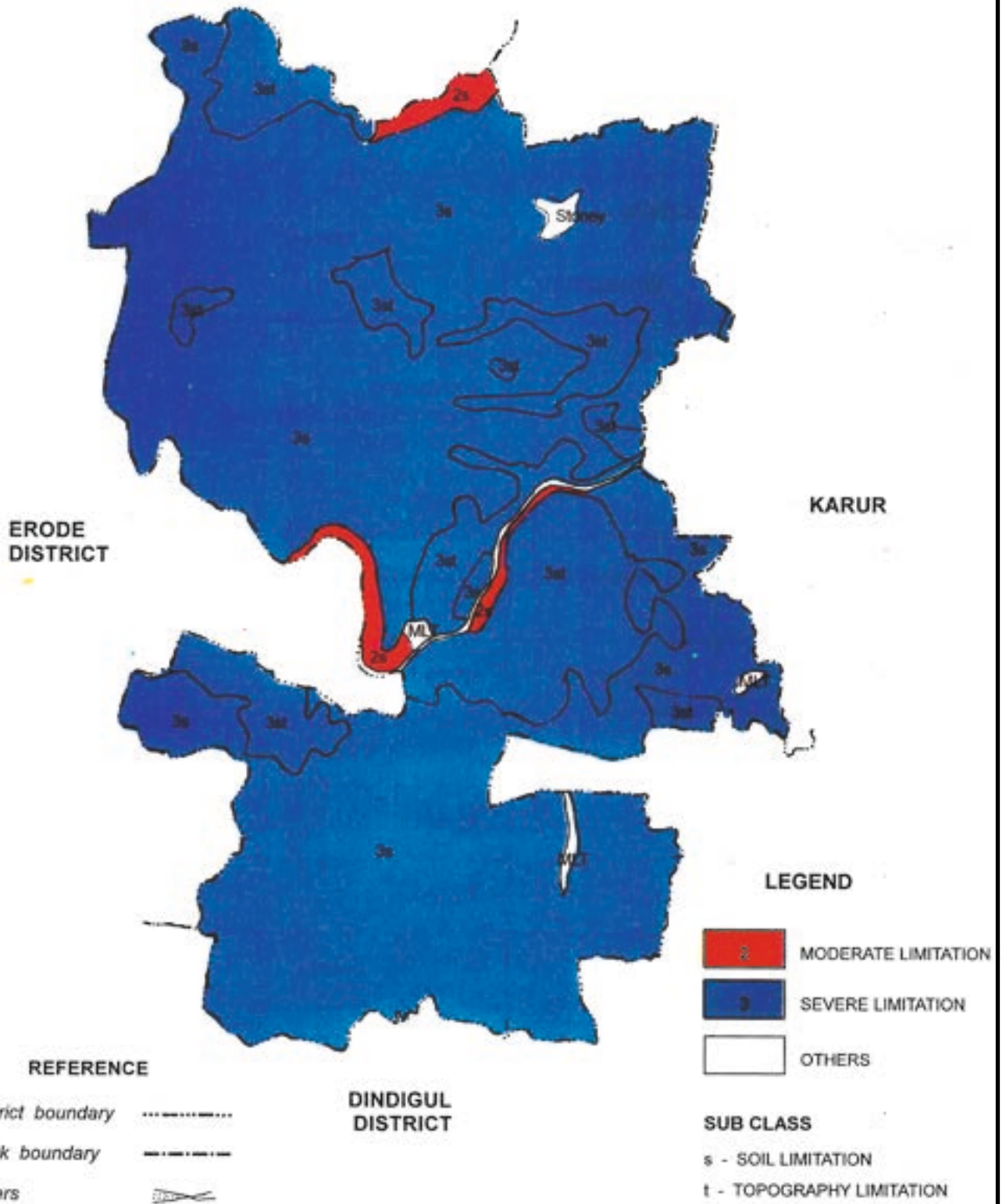
- 2** Lands that have moderate soil limitations for sustained use under irrigation
- 3** Lands that have severe soil limitations for sustained use under irrigation

Sub class

- t** - topography
- s** - soil limitations
- d** - drainage

LAND IRRIGABILITY

ARAVAKKURICHI TALUK

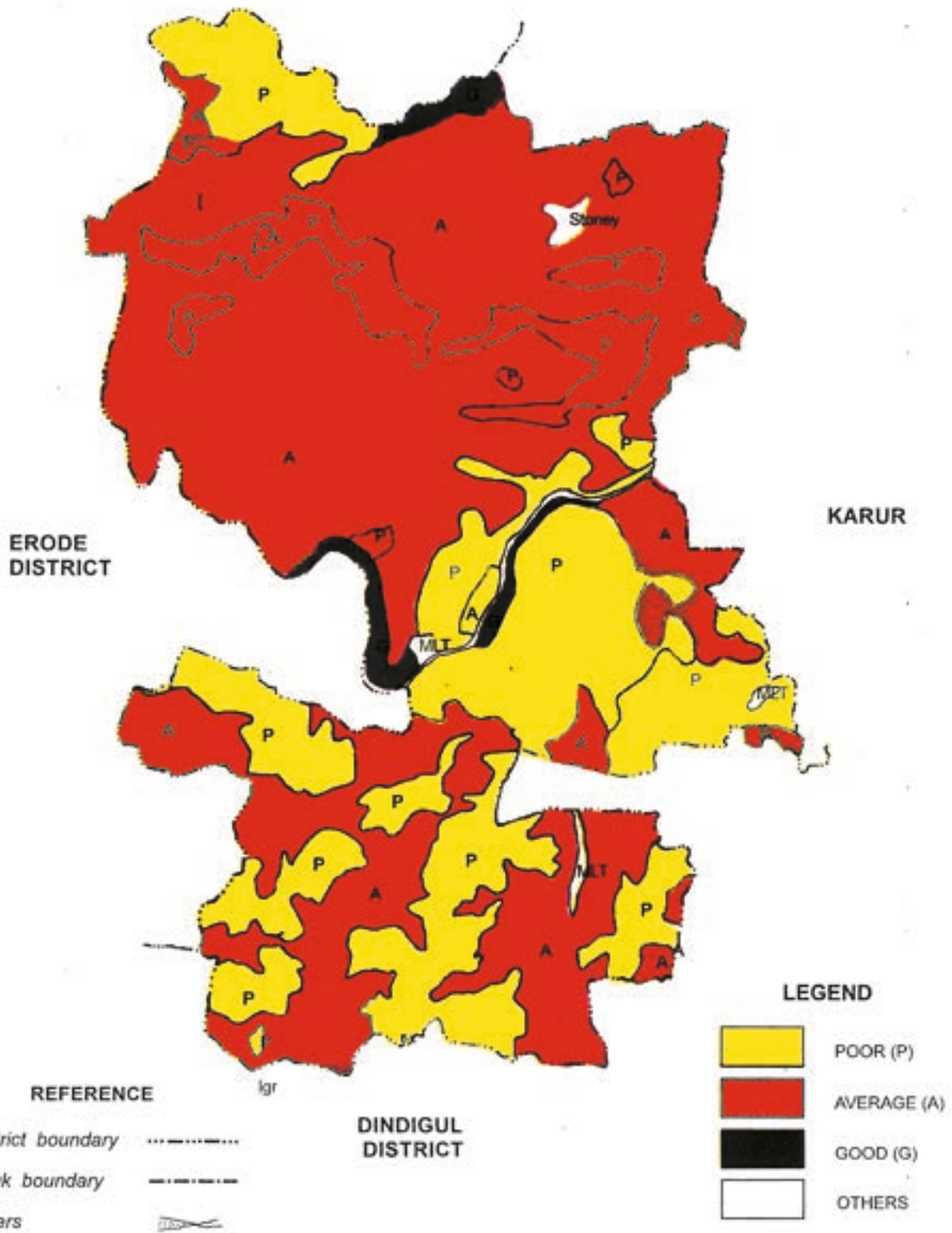


SOIL PRODUCTIVITY

ARAVAKKURICHI TALUK

Sl. No.	Productivity		Soil series	Extent (ha)	Per cent to total
	Rating	Groupings			
1.	8 - 19	Poor (P)	Irugur, Palladam, Syamalagoundanpudur, Vannapatti, Palladam + Tulukkanur + Irugur	35,354	36.22
2.	20 - 34	Average (A)	Tulukkanur, Tulukkanur + Palladam	59,946	61.41
3.	35 - 64	Good (G)	Mixed Alluvium	978	1.00
			Miscellaneous Land Type	326	0.33
			Other	718	0.74
			Forest	294	0.30
Total				97,616	100.00

SOIL PRODUCTIVITY ARAVAKKURICHI TALUK



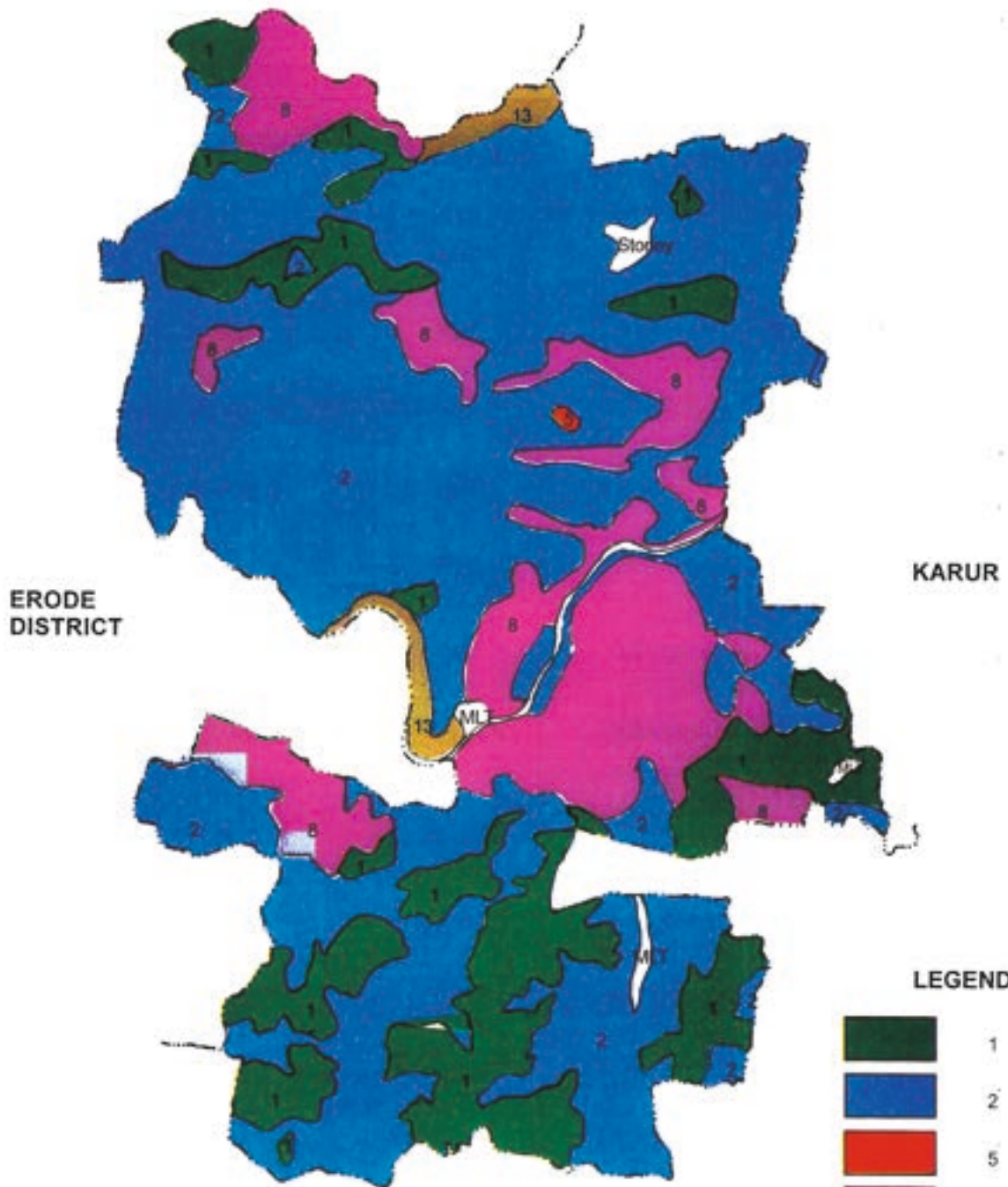
CROPS GROWN

ARAVAKKURICHI TALUK

Sl. No.	Crops grown		Map Symbol	Soil series
	Irrigated	Rainfed		
1.	Banana Rice and Sugarcane	Groundnut Millets and Pulses	1	Irugur
2.	Flowers Rice and Vegetables	Millets and Pulses	2	Mixed Alluvium Tulukkanur Tulukkanur + Palladam
3.	Chillies and Rice	Chillies Groundnut Millets and Rice	5	Vannapatti
4.	Gingelly Groundnut and Sorghum	Banana Betelvine Rice and Sugarcane	8	Palladam Syamala goundan pudur Palladam + Tulukkanur + Irugur



CROPS GROWN ARAVAKKURICHI TALUK



ERODE
DISTRICT

KARUR

DINDIGUL
DISTRICT

REFERENCE

- District boundary - - - - -
- Taluk boundary - - - - -
- Rivers

LEGEND

- 1
- 2
- 5
- 8
- 13
- OTHERS

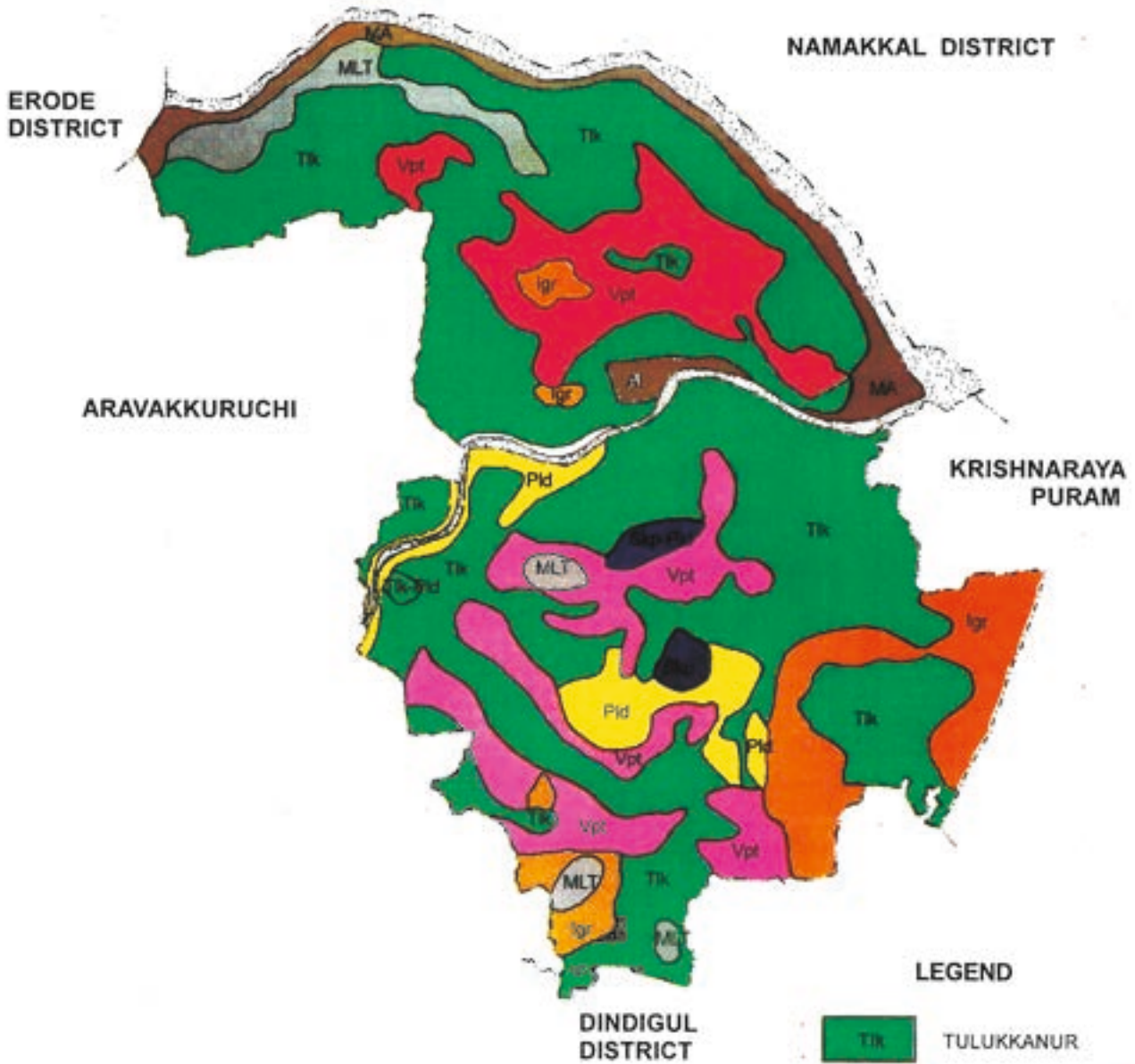
DISTRIBUTION OF SOIL SERIES

KARUR TALUK



S.No.	Soil series	Symbol	Extent (ha)	Percent to total
1.	Tulukkanur	Tlk	30,955	51.04
2.	Vannapatti	Vpt	12,382	20.42
3.	Irugur	Igr	4,620	7.62
4.	Palladam	Pld	2,905	4.79
5.	Mixed Alluvium	MA	2,857	4.71
6.	Syamalagoundanpudur	Skp	333	0.55
7.	Syamalagoundanpudur + Palladam	Skp + Pld	476	0.79
8.	Tulukkanur + Palladam	Tlk + Pld	191	0.31
9.	Irugur + Vannapatti	Igr + Vpt	143	0.24
10.	Miscellaneous Land Type	MLT	2191	3.61
11.	Others	—	3572	5.89
12.	Forest	—	18	0.03
Total			60,643	100.00



SOILS KARUR TALUK



REFERENCE

- District boundary - - - - -
- Taluk boundary - - - - -
- Village boundary - - - - -
- Rivers 
- Forest boundary 

LEGEND

-  TK TLUKKANUR
-  Vpt VANNAPATTI
-  Igr IRUGUR
-  Pld PALLADAM
-  Syg SYAMALA GOUNDANPUDUR
-  MA MIXED ALLUVIUM
-  MLT MISCELLANEOUS LAND TYPE

VILLAGE WISE DISTRIBUTION OF SOIL SERIES AND FERTILITY INDICES

KARUR TALUK

Sl. No.	Rev. nue village	Village No.	Distribution of Soil series in Percentage	Fertility Indices (kg/ac)		
				Nitrogen (N)	Phosphorus (P ₂ O ₅)	Potassium (K ₂ O)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Aathur	14	Tlk 45, Vpt 35, Igr 20	73	20	359
2.	Achamapuram	20	MA 100	81	40	260
3.	Achimangalam	32	Vpt 50, Tlk 30, Skp - Pld 20	70	48	320
4.	Andankovil East	15 B	Tlk 100	64	51	361
5.	Andankovil West	15 A	Tlk 100	75	42	266
6.	Appipalayam	27	Tlk 50, MA 20, Vpt 15, MLT 15	96	82	252
7.	Balambalpuram	24	MA 100	54	66	260
8.	Emur	40	Tlk 55, Vpt 45	82	18	242
9.	Jegadapi	46	Tlk 70, Igr 30	48	42	195
10.	K. Pichampatti	44	Tlk 60, Igr 20, Mlt 10, Vpt 10	75	30	114
11.	Kakkavadi	31	Tlk 60, Vpt 40	48	32	86
12.	Karuppanpalayam	26	MA 50, Tlk 40, Vpt 10	48	50	213
13.	Karur	16	—	64	23	282
14.	Kathaparai	17	Vpt 70, Tlk 30	60	32	186
15.	Kombupalayam	1	MA 100	73	23	150
16.	Koyampalli	22	Vpt 60, Tlk 35	87	11	179
17.	Kuppichipalayam	12	Tlk 60, Vpt 40	70	35	194
18.	Lakshminarayanasa mudram	25	Tlk 55, Igr 25, Vpt 10, MA 10	92	76	198
19.	Manavadi	41	Tlk 60, Pld 15, Skp 15	77	10	230
20.	Manmangalam	13	Tlk 60, Vpt 40	82	6	375
21.	Melapalayam	37	Tlk 85, Vpt 10	87	11	261
22.	Minampalli	18	Vpt 75, Tlk 25	113	21	294
23.	Mukkanankuruchi	42	Tlk 50, Pld 30, Vpt 15	86	15	280

(1)	(2)	(3)	(4)	(5)	(6)	(7)
24.	Nanjaikadambankuruchi	8	MA 85, Tik 15	67	38	171
25.	Nanjaithottakuruchi	7	Tik 55, MA 45	86	14	366
26.	Nanjaipugalur	4	MA 55, Tik 45	84	22	244
27.	Nanniyur	10	Tik 70, Vpt 15, MA 15	68	32	150
28.	Nerur South	19 B	Tik 65, MA 25, Vpt 10	79	23	314
29.	Nerur North	19 A	Tik 65, MA 25, Vpt 10	84	61	372
30.	Paganatham	43	Vpt 35, Tik 30, Igr - Vpt 15	75	30	114
31.	Pallapalayam	28	Tik 85, MA 15	23	70	230
32.	Panchamathevi	23	Vpt 50, Tik 40, MA 10	91	19	255
33.	Puliyur	38	Tik 95, Vpt 5	105	32	348
34.	Punjaikadamban- kurichi	9	Tik 80, MLT 20	89	44	118
35.	Punjai thottakuruchi	6	Tik 70, Vpt 15 Mlt 15	120	40	463
36.	Punjai Pugalur North	5 A	Tik 55, Mlt 20, Vpt 20	76	18	300
37.	Punjai Pugalur South	5 B	Tik 55, Mlt 20, Vpt 20	84	32	284
38.	Puthampur	30	Vpt 60, Tik 40	56	30	177
39.	Sanapiratti	35	Tik 100	72	27	274
40.	Somur	31	MA 40, Vpt 35, Tik 25	75	52	380
41.	Thalapatti	29	Tik 70, Vpt 10, Tik - Pld 10	59	27	86
42.	Thanthoni	36	Tik 60, Vpt 20	84	30	482
43.	Thirukattuthurai	3	Tik 60, Mlt 25, MA 15	53	90	186
44.	Thirumanilaiyur	34	MA 70, Tik 30	90	75	300
45.	Thoranakkalpatti	33	Tik 70, Vpt 15, Mlt 10	76	8	132
46.	Uppidamangalam East	39 A	Tik 95, Igr 5	67	32	234
47.	Uppidamangalam West	39 B	Tik 90, Igr 10	65	32	234
48.	Vangal	11	MA 90, Tik 10	54	43	305
49.	Vellianai North	45 B	Igr 50, Tik 35, Pld 15	90	40	471
50.	Vellianai South	45 A	Igr 50, Tik 35, Pld 15	—	—	—
51.	Vettamangalam East	2 B	Tik 70, MLT 25, MA 25	70	24	300
52.	Vettamangalam west	2 A	Tik 70, MLT 25, MA 5	72	48	258

LAND CAPABILITY CLASSIFICATION

KARUR TALUK

S. No.	Land capability class, sub-class	Soil series	Extent (ha)	Percent to total	Soil limitations	Special needs
1.	II - w Lands that have moderate limitations for sustained use under agriculture	Mixed Alluvium	2,857	4.71	Soil wetness	Cultivation of suitable crops
2.	III-es Lands that have severe limitations for sustained use under agriculture	Irugur, Tulukkanur Irugur + Vannapatti	35,909	59.21	Erosion, depth and texture	Cultivation of suitable crops and soil conservation
3.	IV-es Lands that have very severe limitations for sustained use under agriculture	Tulukkanur + Palladam Syamala -goundan -pudur, Vannapatti Syamala -goundan -pudur + Palladam	16,096	26.55	Erosion, depth and texture	Pasture and forestry development and soil conservation
		Miscellaneous Land Type	2,191	3.61	—	—
		Others	3,572	5.89	—	—
		Forest	18	0.03	—	—
Total			60,643	100.00	—	—

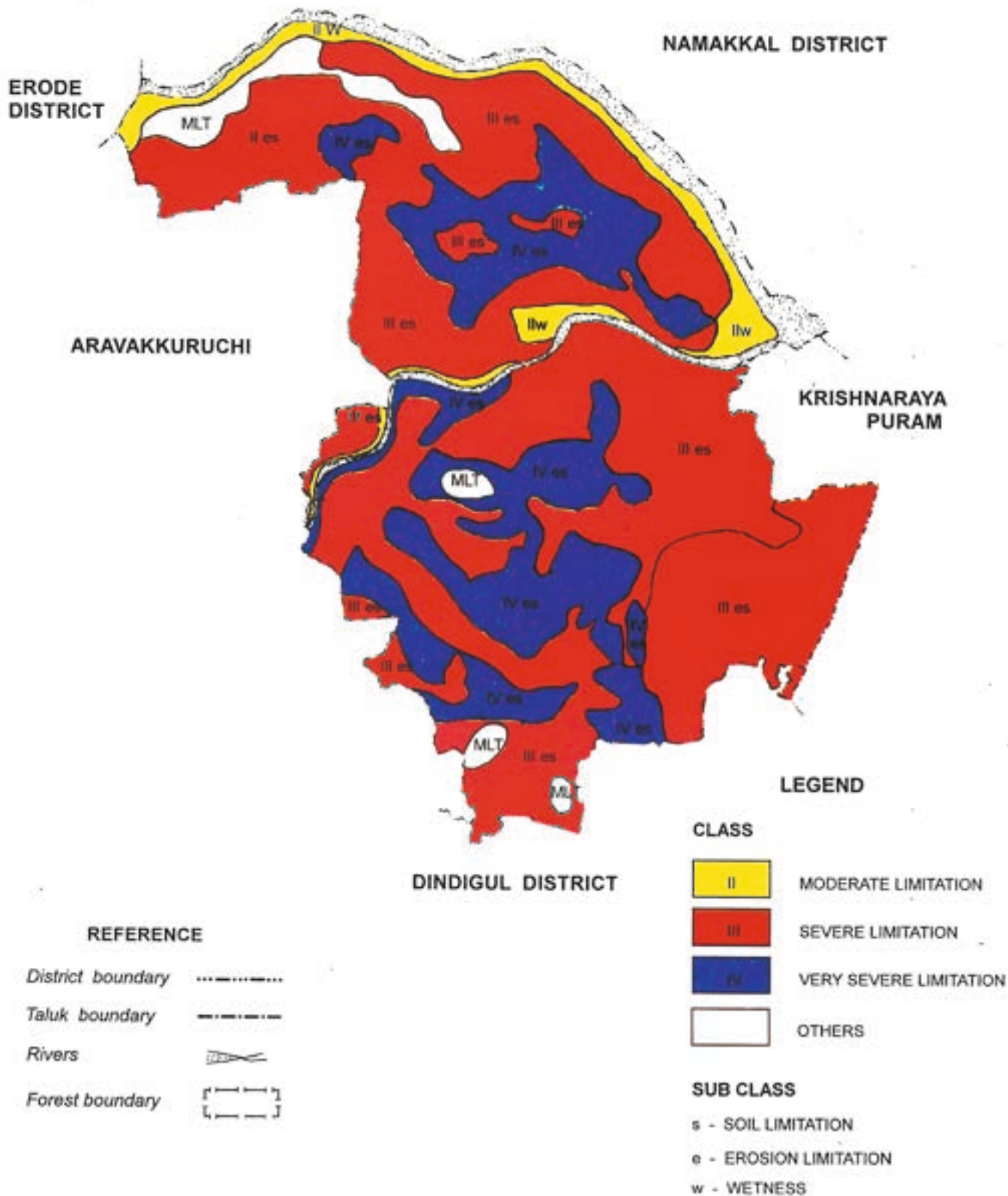
Class

- II** Lands that have moderate limitations for sustained use under agriculture
- III** Lands that have severe limitations for sustained use under agriculture
- IV** Lands that have very severe limitations for sustained use under agriculture

Sub class

- s** - soil
- w** - wetness
- e** - erosion and run off

LAND CAPABILITY KARUR TALUK



LAND IRRIGABILITY CLASSIFICATION

KARUR TALUK

S. No.	Land irrigability class, sub-class	Soil series	Extent (ha)	Percent to total	Soil limitations
1.	2 - d Lands that have moderate limitations for sustained use under irrigation	Mixed Alluvium	2,857	4.71	Drainage and permeability
2.	3 - s Lands that have severe limitations for sustained use under irrigation	Irugur Tulukkanur Irugur + Vannapatti	35,909	59.21	Poor depth, light texture and topography
3.	3 - st Lands that have very severe limitations for sustained use under irrigation	Tulukkanur + Palladam Syamalagoundan -pudur Vannapatti Syamala -goundan -pudur + Palladam	13,191	21.76	Topography, light texture and poor depth
4.	4 - st Lands that have very severe limitations for sustained use under irrigation	Palladam	2,905	4.79	Topography, light texture and poor depth
		Miscellaneous Land Type	2,191	3.61	—
		Others	3,572	5.89	—
		Forest	18	0.03	—
Total			60,643	100.00	

Class

- 2** Lands that have moderate soil limitations for sustained use under irrigation
- 3** Lands that have severe soil limitations for sustained use under irrigation
- 4** Lands that have very severe soil limitations for sustained use under irrigation

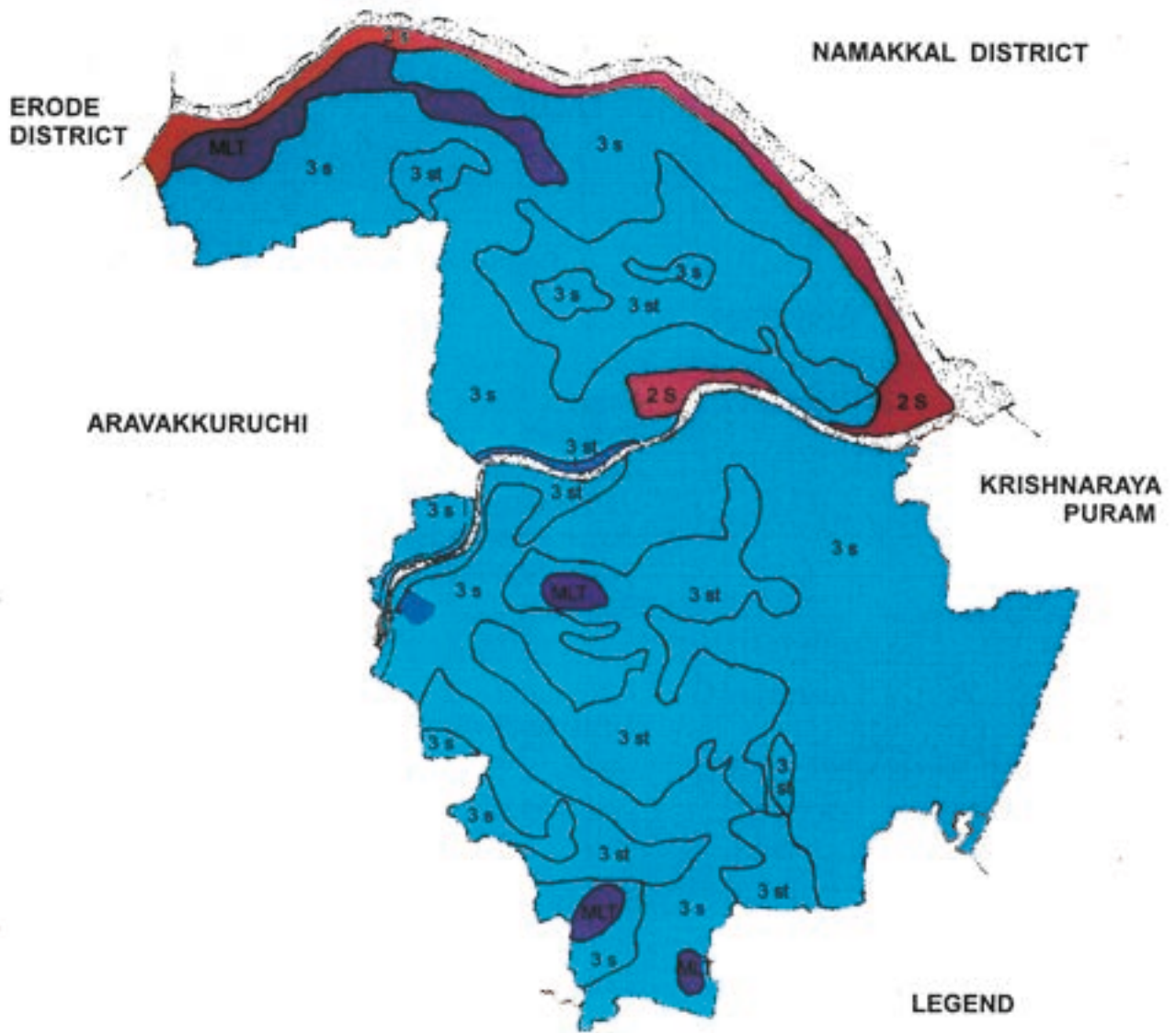
Sub class

- s** - soil
- t** - topography
- d** - drainage



LAND IRRIGABILITY

KARUR TALUK



REFERENCE

District boundary	-----
Taluk boundary	-----
Rivers	
Forest boundary	[- - -]

DINDIGUL DISTRICT

LEGEND

CLASS	
	MODERATE LIMITATION
	SEVERE LIMITATION
	OTHERS

SUB CLASS	
s	SOIL LIMITATION
t	TOPOGRAPHY LIMITATION

SOIL PRODUCTIVITY

KARUR TALUK

Sl. No.	Productivity		Soil series	Extent (ha)	Per cent to total
	Rating	Groupings			
1.	8 - 19	Poor (P)	Irugur, Palladam, Syamalagoundanpudur, Vannapatti, Irugur + Vannapatti Syamalagoundanpudur + Palladam	20,857	34.40
2.	20 - 34	Average (A)	Tulukkanur. Tulukkanur + Palladam	31,146	51.36
3.	35 - 64	Good (G)	Mixed Alluvium	2,857	4.71
			Miscellaneous Land Type	2,191	3.61
			Other	3,572	5.89
			Forest	18	0.03
Total				60,643	100.00

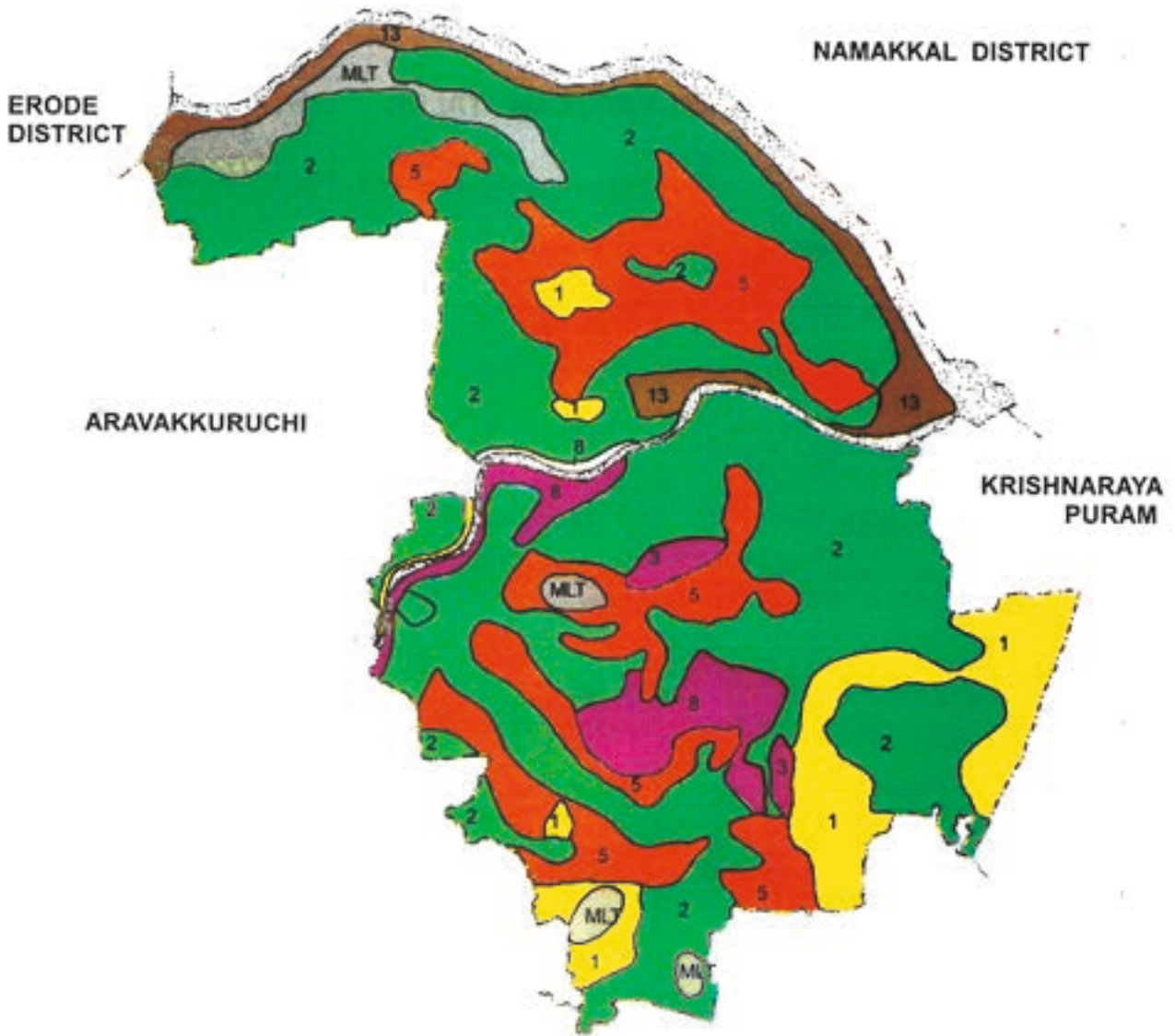
CROPS GROWN

KARUR TALUK

Sl. No.	Crops grown		Map Symbol	Soil series
	Irrigated	Rainfed		
1.	Banana Rice and Sugarcane	Groundnut Millets and Pulses	1	Irugur, Irugur + Vannapatti
2.	Flowers Rice and Vegetables	Millets and Pulses	2	Mixed Alluvium, Tulukkanur, Tulukkanur + Palladam
3.	Chillies and Rice	Chillies Groundnut Millets and Rice	5	Vannapatti
4.	—	Gingelly Groundnut and Sorghum	8	Palladam, Syamala goundan pudur, Syamala goundan pudur + Palladam



CROPS GROWN KARUR TALUK



REFERENCE

District boundary	-----
Taluk boundary	- - - - -
Rivers	
Forest boundary	[- - - -]

DINDIGUL DISTRICT **LEGEND**

	1
	2
	3
	8
	13
	OTHERS

DISTRIBUTION OF SOILS SERIES

KRISHNARAYAPURAM TALUK

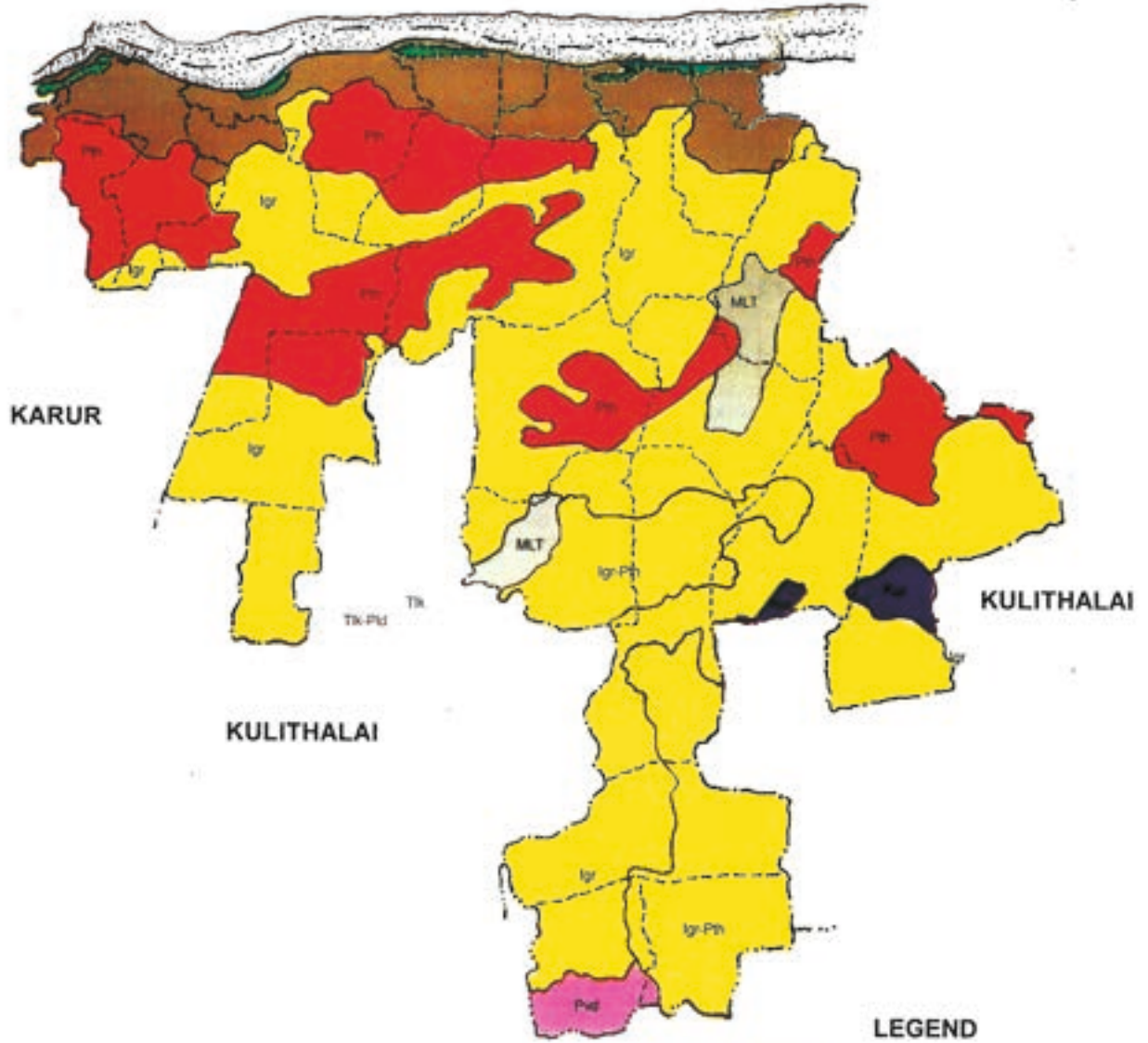
S.No.	Soil series	Symbol	Extent (ha)	Percent to total
1.	Irugur	Igr	19,888	50.35
2.	Palathurai	Pth	6,827	17.28
3.	Mixed Alluvium	MA	4,961	12.56
4.	Kalugur	Kur	509	1.29
5.	Palaviduthi	Pvd	466	1.18
6.	Irugur + Palaviduthi	Igr + Pth	4,792	12.13
7.	Miscellaneous Land Type	MLT	1,060	2.68
	Others	—	848	2.15
	Forest	—	152	0.38
Total			39,503	100.00



SOILS

KRISHNARAYAPURAM TALUK

THIRUCHIRAPPALLI DISTRICT



REFERENCE

District boundary	-----
Taluk boundary	- - - - -
Village boundary
Rivers	
Forest boundary	≡ ≡ ≡

THIRUCHIRAPPALLI DISTRICT

LEGEND

	IRUGUR	(Igr)
	PALATHURAI	(Pth)
	PALAVIDUTHI	(Pvd)
	KALUGUR	(Kur)
	MIXED ALLUVIUM	(MA)
	MISCELLANEOUS LAND TYPE	(MLT)
	RESERVE FOREST	(R.F)

VILLAGE WISE DISTRIBUTION OF SOIL SERIES AND FERTILITY INDICES

KRISHNARAYAPURAM TALUK

Sl. No.	Revenue village	Village No.	Distribution of Soil series in Percentage	Fertility status (kg/ac)		
				Nitrogen (N)	Phosphorus (P ₂ O ₅)	Potassium (K ₂ O)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Balarajapuram	21	Pth 85, MA 15	82	46	224
2.	Chindalavadi	12	Igr 80, MA 20	42	28	196
3.	Kallapalli	11	MA 100	49	39	248
4.	Kammanallur	14	MA 100	148	13	412
5.	Karupathur	9	Igr 80, Pth 20	87	30	462
6.	Kosur	51	Igr 55, Igr + Pth 45	40	7	143
7.	Krishnarayapuram North	15/1	Pth 50, Igr 25, MA 25	77	13	361
8.	Krishnarayapuram South	15/2	Pth 50, Igr 25, MA 25	77	13	361
9.	Mahadanapuram North	13A	Igr 50, Pth 40, MA 10	77	13	361
10.	Mahadanapuram South	13 B	Igr 50, Pth 40, MA 10	51	46	271
11.	Manavasi	19	Igr 75, Igr + Pth 25	70	22	248
12.	Mathagiri	52	Igr 50, Pvd 30, Igr + Pth 20	90	7	449
13.	Mayanur	18	MA 75, Igr 25	77	12	355
14.	Muthurengampatti	23	Igr 100	85	38	450
15.	Panchapatti	28	Igr - Pth 60, Igr 20, MLT 20	112	30	288

(1)	(2)	(3)	(4)	(5)	(6)	(7)
16.	Pappakapatti	31	Igr 65, Kur 10, Igr - Pth 25	96	27	340
17.	Pillapalayam	10	Igr 60, MA 40	86	86	383
18.	Pothurawthanpatti	29	Igr - Pth 55, Igr 45	117	40	330
19.	Renganathapuram North	20/1	MA 45, Pth 40, Igr 10	105	43	239
20.	Renganathapuram South	20/2	MA 45, Pth 40, Igr 10	105	43	239
21.	Sengal	22	Igr 70, Pth 30	80	46	306
22.	Sivayam North	32/1	Igr 60, Pth 25, Kur 15	93	16	163
23.	Sivayam South	32/2	Igr 60, Pth 25, Kur 15	93	16	163
24.	Sithalavai	16	Pth 65, Igr 35	94	55	287
25.	Thirukampuliyur	17	Pth 45, Igr 35, MA 20	84	32	252
26.	Thondamanginam	53	Igr 100	48	18	202
27.	Vayalur	30	Igr 70, Pth 25, Igr - Pth 5	51	37	276
28.	Veeraiyapalayam	27	Igr 70, Pth 30	106	22	251

LAND CAPABILITY CLASSIFICATION

KRISHNARAYAPURAM TALUK

S. No.	Land capability class, sub-class	Soil series	Extent (ha)	Percent to total	Soil limitations	Special needs
1.	II - e Lands that have moderate limitations for sustained use under agriculture	Palaviduthi Palathurai	7,293	18.46	Erosion	Soil conservation
2.	II - w Lands that have moderate limitations for sustained use under agriculture	Mixed Alluvium	4,961	12.56	Soil wetness	Cultivation of suitable crops
3.	III-es Lands that have severe limitations for sustained use under agriculture	Irugur Irugur + Palathurai	24,680	62.48	Erosion, depth alkalinity and texture	Soil conservation and cultivation of suitable crops
4.	IV-es Lands that have very severe limitations for sustained use under agriculture	Kalugur	509	1.29	Alkalinity	Improvement of drainage and cultivation of suitable crops
		Miscellaneous Land Type	1,060	2.68	—	—
		Others	848	2.15	—	—
		Forest	152	0.38	—	—
Total			39,503	100.00	—	—

Class

- II** Lands that have moderate limitations for sustained use under agriculture
- III** Lands that have severe limitations for sustained use under agriculture
- IV** Lands that have very severe limitations for sustained use under agriculture

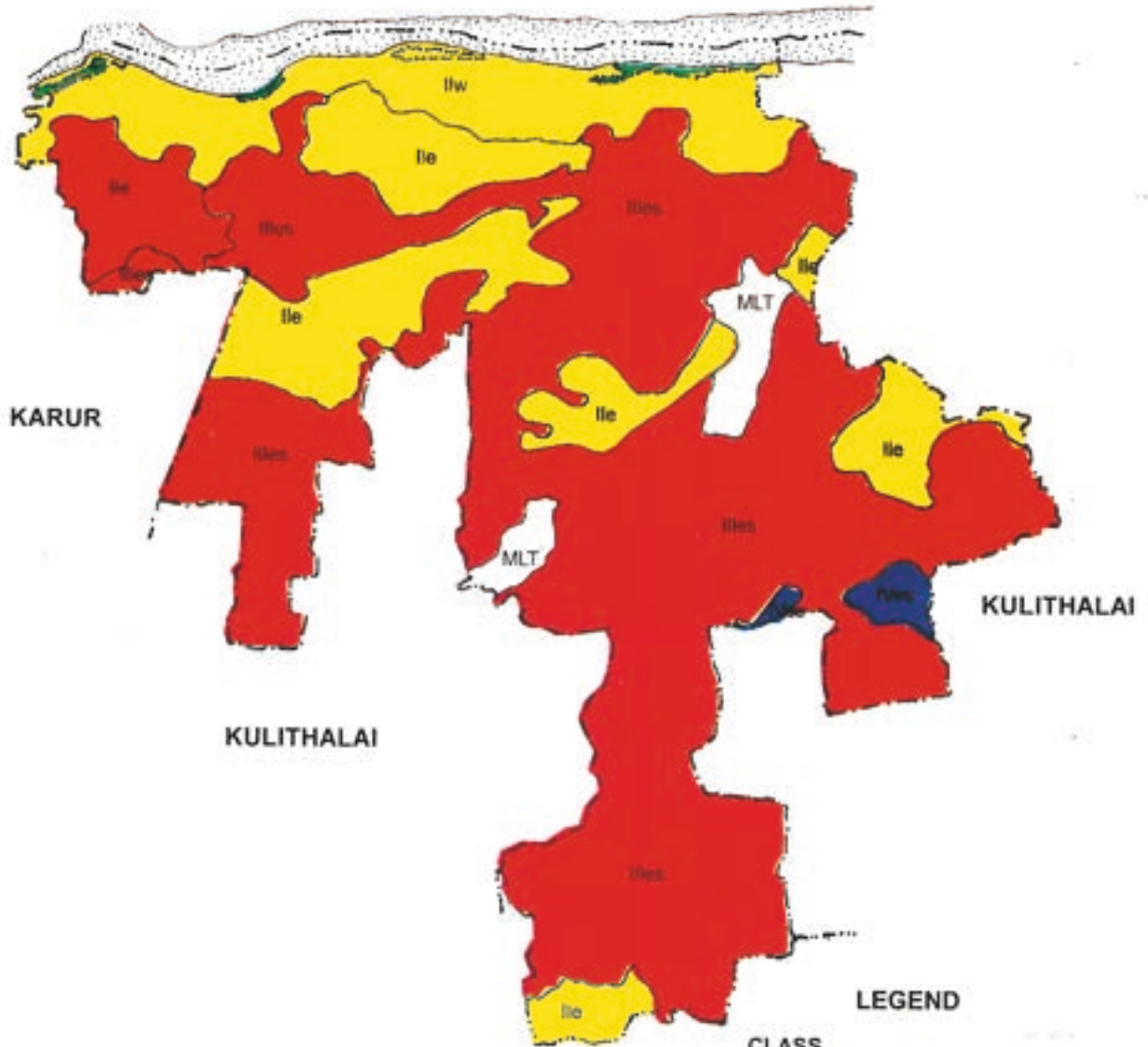
Sub class

- e** - erosion
- s** - soil
- w** - wetness



LAND CAPABILITY KRISHNARAYAPURAM TALUK

THIRUCHIRAPPALLI DISTRICT



KARUR

KULITHALAI

KULITHALAI

THIRUCHIRAPPALLI
DISTRICT

LEGEND

CLASS

	MODERATE LIMITATION
	SEVERE LIMITATION
	VERY SEVERE LIMITATION
	OTHERS

SUB CLASS

- s - SOIL LIMITATION
- e - EROSION LIMITATION
- w - WETNESS

REFERENCE

- District boundary
- Taluk boundary
- Rivers
- Forest boundary

LAND IRRIGABILITY CLASSIFICATION

KRISHNARAYAPURAM TALUK

S. No.	Land irrigability class, sub-class	Soil series	Extent (ha)	Percent to total	Soil limitations
1.	2 - d Lands that have moderate limitations for sustained use under irrigation	Mixed Alluvium	4,961	12.56	Drainage and permeability
2.	2 - st Lands that have moderate limitations for sustained use under irrigation	Palathurai and Palaviduthi	7,293	18.46	Poor depth, light texture and topography
3.	3 - s Lands that have severe limitations for sustained use under irrigation	Irugur, Kalugur Irugur + Palathurai	25,189	63.77	poor depth, light texture and alkalinity
		Miscellaneous Land Type	1,060	2.68	—
		Others	848	2.15	—
		Forest	152	0.38	—
Total			39,503	100.00	—

Class

- 2** Lands that have moderate soil limitations for sustained use under irrigation
- 3** Lands that have severe soil limitations for sustained use under irrigation

Sub class

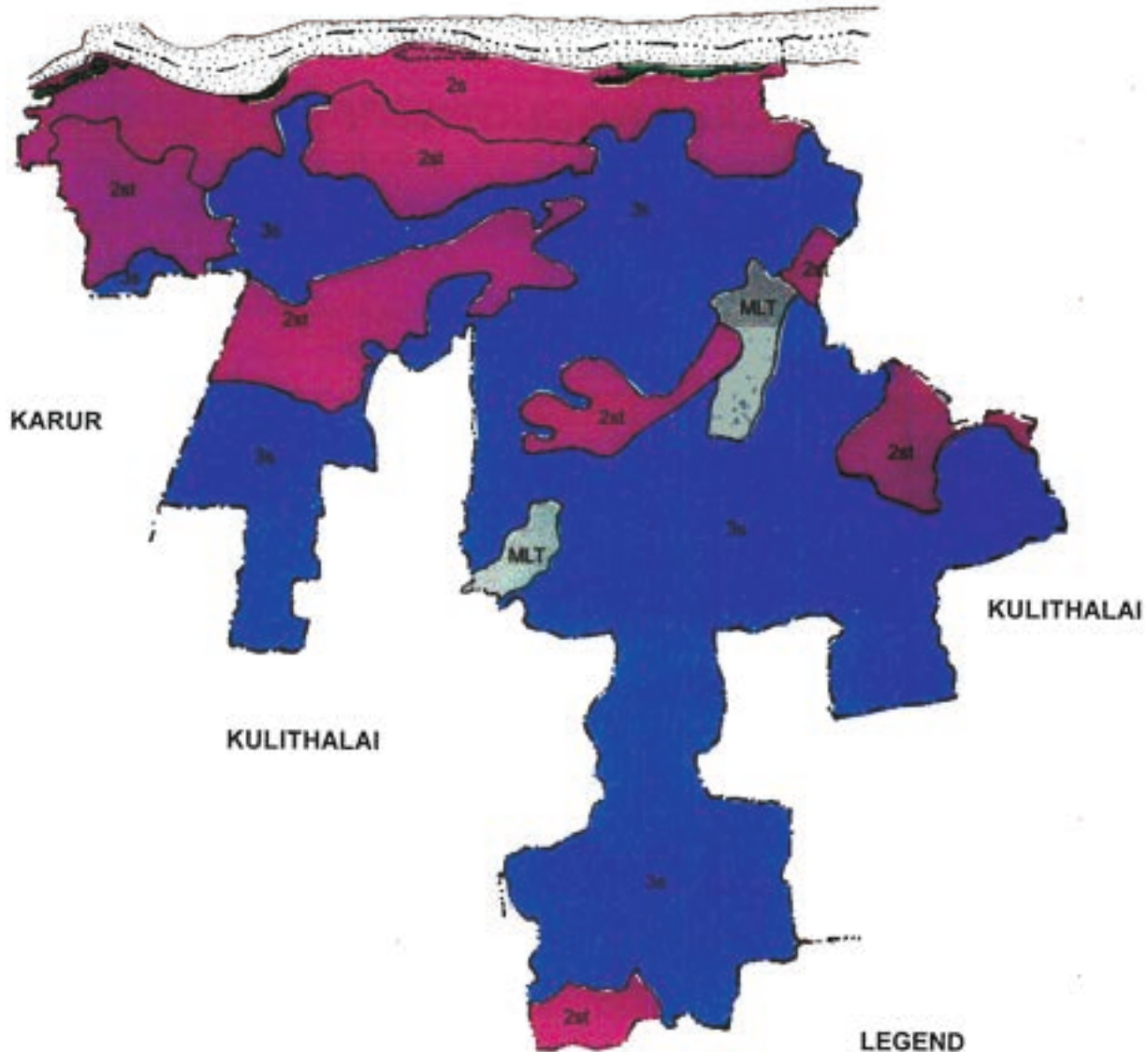
- s** - soil
- d** - drainage
- t** - topography



LAND IRRIGABILITY

KRISHNARAYAPURAM TALUK

THIRUCHIRAPPALLI DISTRICT



REFERENCE

- District boundary
- Taluk boundary
- Rivers
- Forest boundary

THIRUCHIRAPPALLI DISTRICT

LEGEND

CLASS

- 2 MODERATE LIMITATION
- 3 SEVERE LIMITATION
- OTHERS

SUB CLASS

- s - SOIL LIMITATION
- t - TOPOGRAPHY LIMITATION

SOIL PRODUCTIVITY

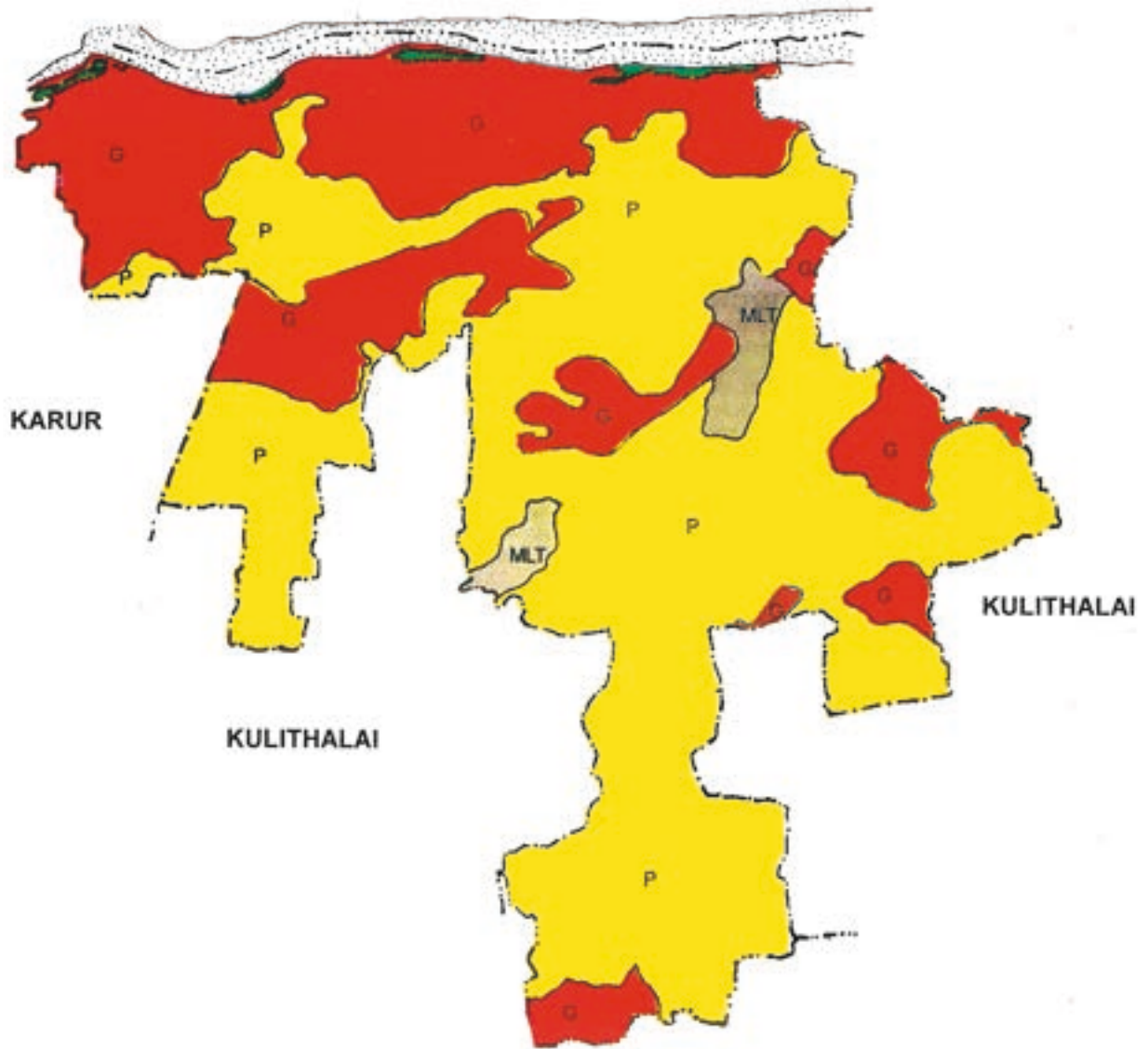
KRISHNARAYAPURAM TALUK

Sl. No.	Productivity		Soil series	Extent (ha)	Per cent to total
	Rating	Grouping			
1.	8 - 19	Poor (P)	Irugur, Irugur + Palathurai	24,680	62.48
2.	35 - 64	Good (G)	Kalugur, Palathurai, Palaviduthi and Mixed Alluvium	12,763	32.31
			Miscellaneous Land Type	1,060	2.68
			Others	848	2.15
			Forest	152	0.38
Total				39,503	100.00



SOIL PRODUCTIVITY KRISHNARAYAPURAM TALUK

THIRUCHIRAPPALLI DISTRICT



REFERENCE

- District boundary - - - - -
- Taluk boundary - - - - -
- Rivers
- Forest boundary

LEGEND

- POOR (P)
- GOOD (G)
- OTHERS

CROPS GROWN

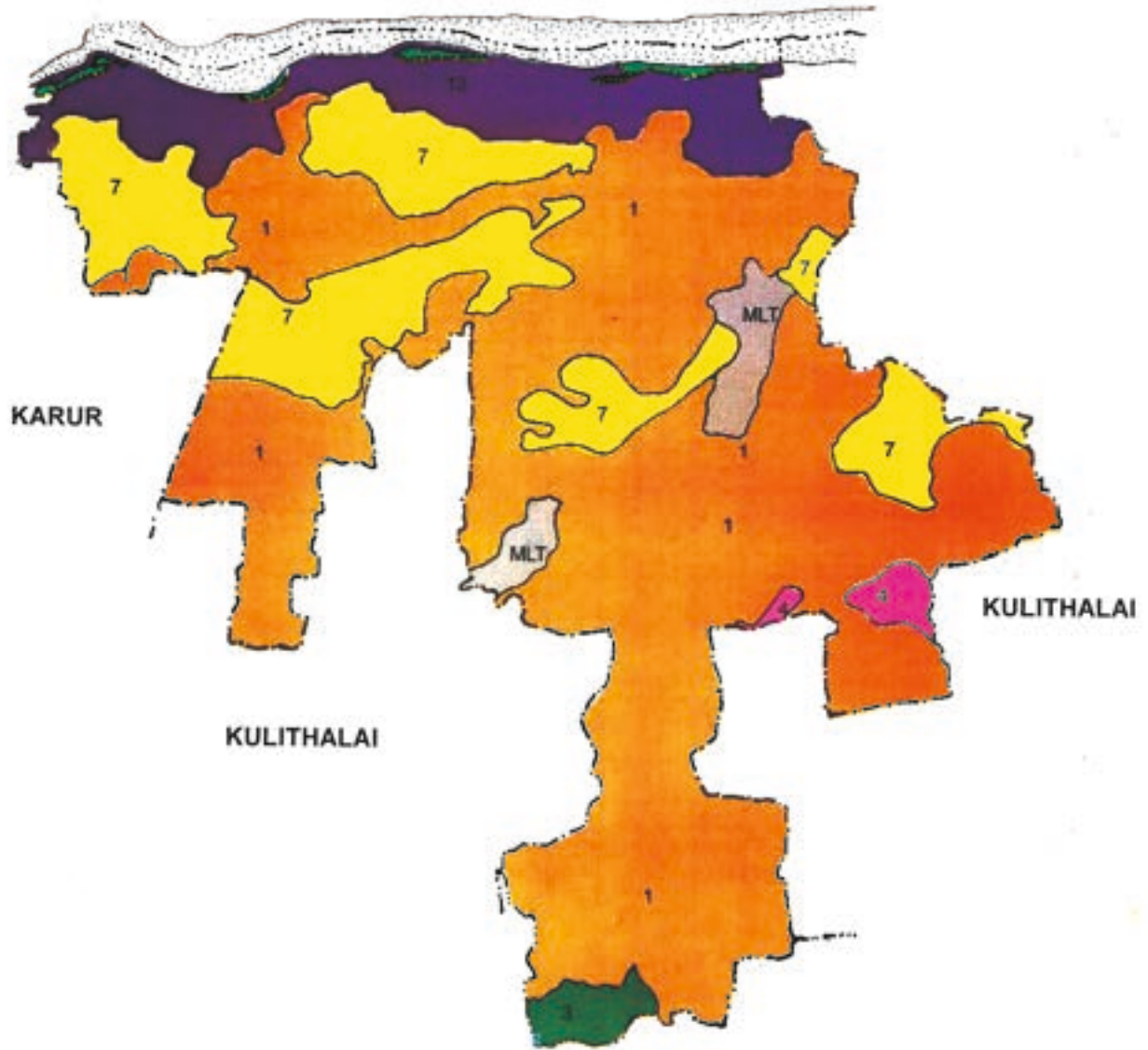
KRISHNARAYAPURAM TALUK

Sl. No.	Crops grown		Map Symbol	Soil series
	Irrigated	Rainfed		
1.	Banana, Rice and Sugarcane	Groundnut, Millets and Pulses	1	Irugur Irugur + Palathurai
2.	Flowers, Rice and Vegetables	Millets and Pulses	2	Mixed Alluvium
3.	Groundnut, Onion, Rice, Sugarcane and Tapioca	Chillies, Coriander, Cotton, Gingelly, Groundnut, Millets and Red gram	3	Palaviduthi Pilamedu
4.	Cotton, Groundnut, Millets and Rice	Gingelly, Ground- nut, Millets and Red gram	4	Kalugur
5.	Chillies, Gingelly Millets, Rice and Redgram	Castor, Cumbu and Gingelly	7	Palathurai





CROPS GROWN KRISHNARAYAPURAM TALUK

THIRUCHIRAPPALLI DISTRICT



REFERENCE

- District boundary (dotted line)
- Taluk boundary - - - - - (dashed line)
- Rivers 
- Forest boundary 

LEGEND

-  1
-  3
-  4
-  7
-  13
-  OTHERS

DISTRIBUTION OF SOILS SERIES

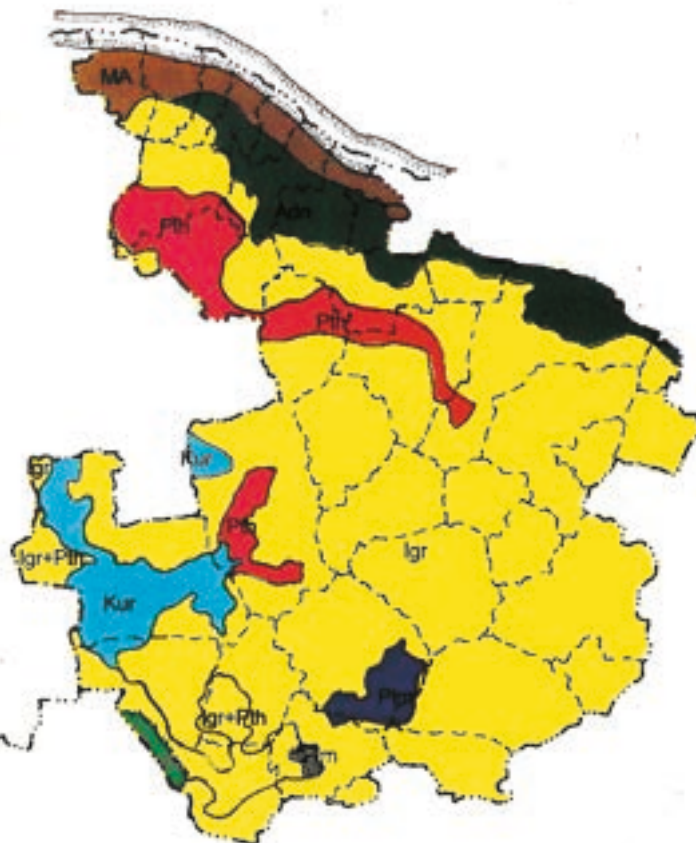
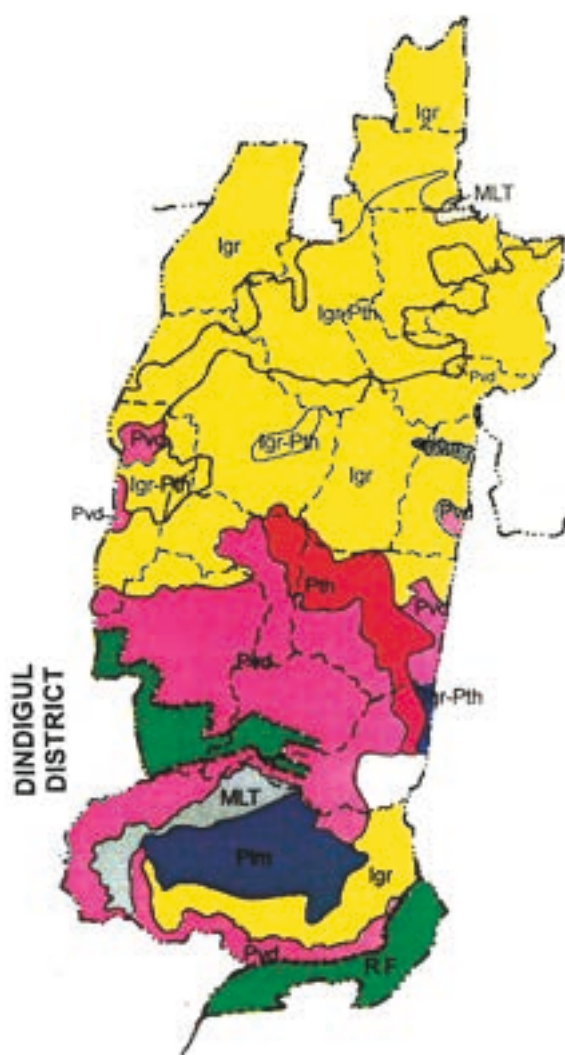
KULITHALAI TALUK

S.No.	Soil series	Symbol	Extent (ha)	Percent to total
1.	Irugur	Igr	49,491	53.91
2.	Palaviduthi	Pvd	9,593	10.45
3.	Palathurai	Pth	5,380	5.86
4.	Adhanur	Adn	3,497	3.81
5.	Pilamedu	Plm	3,228	3.52
6.	Kalugur	Kur	2,869	3.13
7.	Mixed Alluvium	MA	1,435	1.56
8.	Irugur + Palathurai	Igr + Pth	8,428	9.18
9.	Miscellaneous Land Type	MLT	1,255	1.37
10.	Others	—	896	0.98
11.	Forest	—	5,723	6.23
Total			91,795	100.00



SOILS KULITHALAI TALUK

KRISHNARAYAPURAM


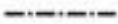





THIRUCHIRAPPALLI
DISTRICT

LEGEND

	IRUGUR	(Igr)
	PALAVIDUTHI	(Pvd)
	PALATHURAI	(Pth)
	KALUGUR	(Kur)
	ADHANUR	(Adn)
	PILAMEDU	(Pim)
	MIXED ALLUVIUM	(MA)
	MISCELLANEOUS LAND TYPE	(MLT)
	FOREST	

REFERENCE

- District boundary 
- Taluk boundary 
- Village boundary 
- Rivers 
- Forest boundary 

VILLAGE WISE DISTRIBUTION OF SOIL SERIES AND FERTILITY INDICES

KULITHALAI TALUK

Sl. No.	Revenue village	Village No.	Distribution of Soil series in Percentage	Fertility Indices (kg/ac)		
				Nitrogen (N)	Phosphorus (P ₂ O ₅)	Potassium (K ₂ O)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Adanur	74	Pvd 40, Igr 40, Pth 15, Igr - Pth 5	52	57	335
2.	Alathur	60	Igr 100	101	62	326
3.	Chinniampalayam	56	Igr 55, Kur 45	110	10	210
4.	Devarmalai	26	Igr 45, Pvd 15, Igr - Pth 40	84	35	236
5.	Edaiyapatti T East	78/2	Plm 40, Igr 30	49	101	437
6.	Edaiyapatti T West	78/1	Pvd 15, MLT 15	49	101	437
7.	Gudalur	24	Igr 60, Pth 30, Kur 10	119	20	205
8.	Inungur	36	Igr 80, Pth 20	72	32	245
9.	Hiranyamangalam	33	Igr 65, Pth 35	69	44	218
10.	Kadambarkoil	5/1	Igr 55, Igr - Pth 45	85	14	310
11.	Kalayapatti	25	Igr - Pth 55, Igr 45	62	42	350
12.	Kallai	45	Igr 100	53	17	194
13.	Kalladai	46	Igr 70, Plm 30	49	43	312
14.	Kalugur	50	Kur 50, Igr 40, Igr - Pth 10	115	13	277
15.	Karuvappanaickan-pettai	8	MA 80, Igr 20	79	10	300

(1)	(2)	(3)	(4)	(5)	(6)	(7)
16.	Keelapaguthi	71	Igr 70, Kur 10, Igr - Pth 20	112	30	245
17.	Keeranur	66	Igr 70, Igr - Pth 30	48	70	460
18.	Kulithalai	4	MA 50, Adn 50	50	32	268
19.	Kumaramangalam	1	Adn 90, MA 10	62	27	273
20.	Manathattai	6	Igr 35, Adn 35, MA 30	86	16	320
21.	Manjanaickanpettai	24	Igr 95, Igr - Pth 5	82	33	231
22.	Marathur	73	Pvd 55, Pth 45	69	38	195
23.	Marudhur North Bit I	2/1	Igr 45, Adn 35, Pth 10, MA 10	50	20	278
24.	Marudhur North Bit II	2/2	Igr 45, Adn 35, Pth 10 MA 10	50	20	278
25.	Marudhur South Bit I	2/3	Igr 45, Adn 35, Pth 10, MA 10	50	20	278
26.	Marudhur South Bit II	2/4	Igr 45, Adn 35, Pth 10, MA 10	50	20	278
27.	Melapaguthi	70	Igr 85, Igr + Pth 15	112	30	245
28.	Mudalaipatti	39	Igr 90, Pth 10	72	9	345
29.	Mullipadi	77	Pvd 60, Igr 30, Pth 10	49	96	459
30.	Naganur	54	Igr 65, Kur 5, Igr + Pth 30	71	28	145

(1)	(2)	(3)	(4)	(5)	(6)	(7)
31.	Nallur	35	Igr 100	72	32	225
32.	Nangavaram North Bit I	38 - 1	Igr 60, Adn 30, Pth 10	76	29	235
33.	Nangavaram North Bit II	38 - 2	Igr 60, Adn 30, Pth 10	76	29	235
34.	Nangavaram South Bit I	38 - 3	Igr 60, Adn 30, Pth 10	76	29	235
35.	Nangavaram South Bit II	38 - 4	Igr 60, Adn 30, Pth 10	76	29	235
36.	Neidalur North	40/1	Igr 100	81	38	302
37.	Neidalur South	40/2	Igr 100	81	38	302
38.	Palaviduthi	76	Pvd 100	71	26	223
39.	Pannaipatti	68	Igr - Pth 80, Igr 20	71	55	385
40.	Pappayambadi	63	Igr 100	75	15	488
1.	Pathiripatti	48	Igr 60, Igr - Pth 25, Plm 15	103	12	221
42.	Pillur	47	Igr 100	105	15	225
43.	Porunthalur	55	Igr - Pth 55, RF 35, Igr 10	120	5	217
44.	Poyyamani	37	Igr 75, Adn 25	74	34	249
45.	Puthur	44	Igr 100	82	56	421

(1)	(2)	(3)	(4)	(5)	(6)	(7)
46.	Pulutheri	42	Igr 100	119	9	193
47.	Rajendram North	3/1	Adn 50, MA 30, Igr 15, Pth 5	48	32	312
48.	Rajendram South	3/2	Adn 50, MA 30, Igr 15, Pth 5	48	32	312
49.	Rachandarthurumalai	41	Igr 100	122	11	191
50.	Sathyamangalam	61	Pth 55, Igr 45	103	65	331
51.	Seplapatti	52	Igr 100	115	11	210
52.	Sembianatham	75	Pvd 90, Igr 10	51	70	369
53.	Sooriyanur	57	Igr 95, Adn 5	108	10	211
54.	Thalinji	59	Igr 100	103	59	324
55.	Thennilai	67	Igr - Pth 50, Igr 45, Pvd 5	44	68	454
56.	Thogamalai	49	Igr 70, Igr - Pth 30	105	21	240
57.	Uthupatti	62	Igr 100	99	53	327
58.	Vadaseri	43	Igr 95, Plm 5	51	21	199
59.	Vadavambadi	64	Igr 75, Igr - Pth 25	44	68	430
60.	Vadhiam	7	MA 55, Igr 40, Adn 5	83	13	317
61.	Vaigainallur North	5/2	Igr 40, Pth 40, Adn 10, MA 10	85	14	310
62.	Vaigainallur South	5/3	Igr 40, Pth 40, Adn 10, MA 10	85	14	310
63.	Valavarmangalam	72	Igr 100	108	26	241
64.	Varanavai	69	Igr - Pth 95, Igr 5	160	56	317
65.	Vellapatti	65	Igr - Pth 65, Igr 25, MLT 10	41	66	451

LAND CAPABILITY CLASSIFICATION

KULITHALAI TALUK

S. No.	Land capability class, sub-class	Soil series	Extent (ha)	Percent to total	Soil limitations	Special needs
1.	II - e Lands that have moderate limitations for sustained use under agriculture	Palaviduthi and Palathurai	14,973	16.31	Erosion	Soil conservation
2.	II - w Lands that have moderate limitations for sustained use under agriculture	Adhanur and Mixed Alluvium	4,932	5.37	Soil wetness	Cultivation of suitable crops
3.	III-es Lands that have severe limitations for sustained use under agriculture	Irugur Pilamedu and Irugur + Palathurai	61,147	66.61	Erosion, texture, depth and alkalinity	Soil conservation and selection of suitable crops
4.	IV-es Lands that have very severe limitations for sustained use under agriculture	Kalugur	2,869	3.13	Alkalinity	Drainage Improvement and cultivation of suitable crops
		Miscellaneous Land Type	1,255	1.37	—	—
		Others	896	0.98	—	—
		Forest	5,723	6.23	—	—
Total			91,795	100.00	—	—

Class

- II** Lands that have moderate limitations for sustained use under agriculture
- III** Lands that have severe limitations for sustained use under agriculture
- IV** Lands that have very severe limitations for sustained use under agriculture

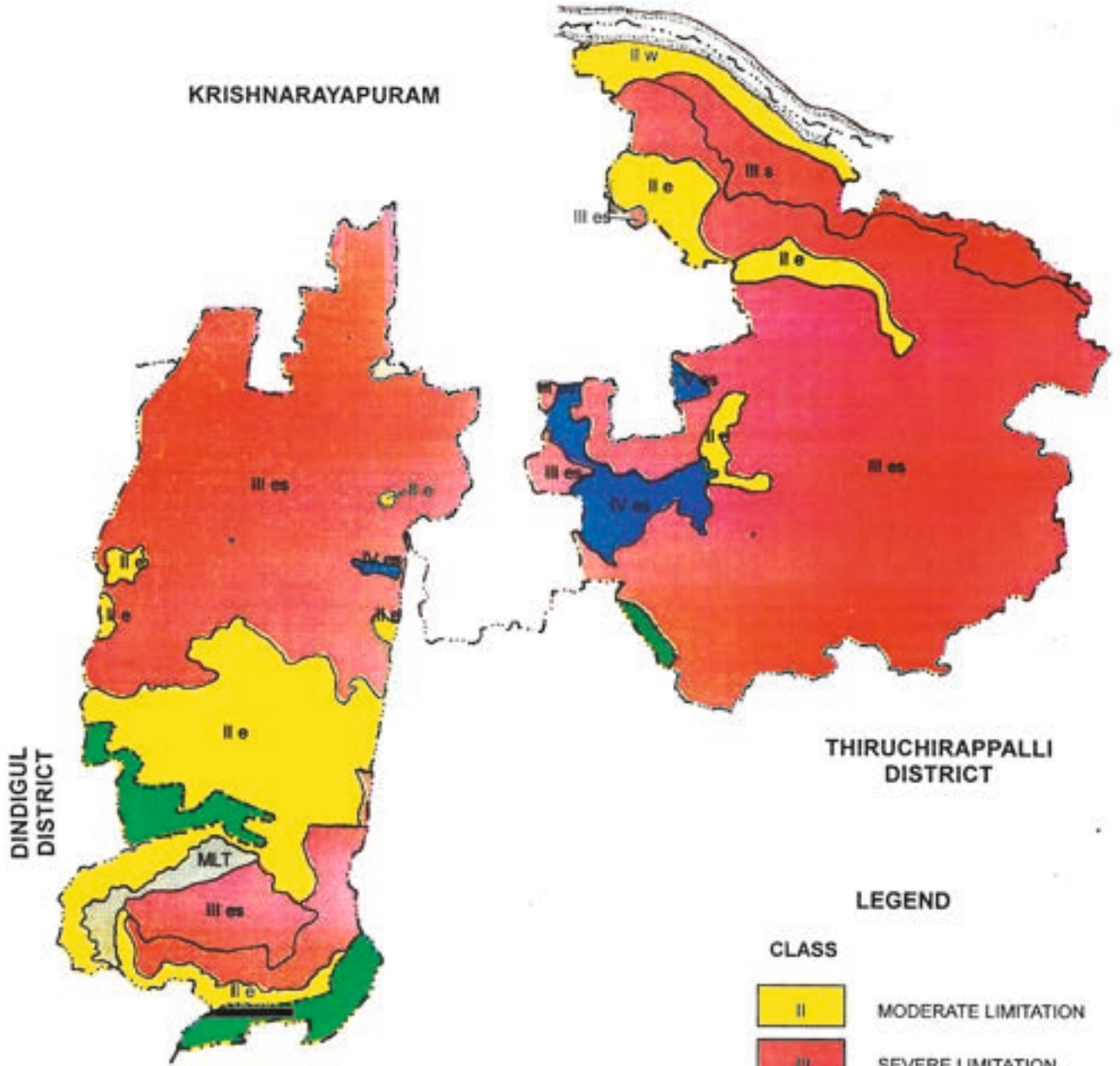
Sub class

- s** - soil
- e** - erosion
- w** - wetness



LAND CAPABILITY

KULITHALAI TALUK



REFERENCE

- District boundary - - - - -
- Taluk boundary - - - - -
- Rivers
- Forest boundary

LEGEND

CLASS

- II MODERATE LIMITATION
- III SEVERE LIMITATION
- IV VERY SEVERE LIMITATION
- OTHERS

SUB CLASS

- s - SOIL LIMITATION
- e - EROSION LIMITATION
- w - WETNESS

LAND IRRIGABILITY CLASSIFICATION

KULITHALAI TALUK

S. No.	Land irrigability class, sub-class	Soil series	Extent (ha)	Percent to total	Soil limitations	
1.	2 - d	Lands that have moderate limitations for sustained use irrigation	Adhanur and Mixed Alluvium	4,932	5.37	Drainage and permeability
	2 - st	Lands that have moderate limitations for sustained use under irrigation	Palathurai and Palaviduthi	14,973	16.31	Topography , light texture and poor depth
2.	3 - s	Lands that have severe limitations for sustained use under irrigation	Irugur, Kalugur and Irugur + Palathurai	60,788	66.22	poor depth, light texture and alkalinity
	3 - sd	Lands that have severe limitations for sustained use under irrigation	Pilamedu	3,228	3.52	Heavy texture and poor drainage
			Miscellaneous Land Type	1,255	1.37	—
			Others	896	0.98	—
		Forest	5,723	6.23	—	
Total			91,975	100.00	—	

Class

- 2** Lands that have moderate soil limitations for sustained use under irrigation
- 3** Lands that have severe soil limitations for sustained use under irrigation

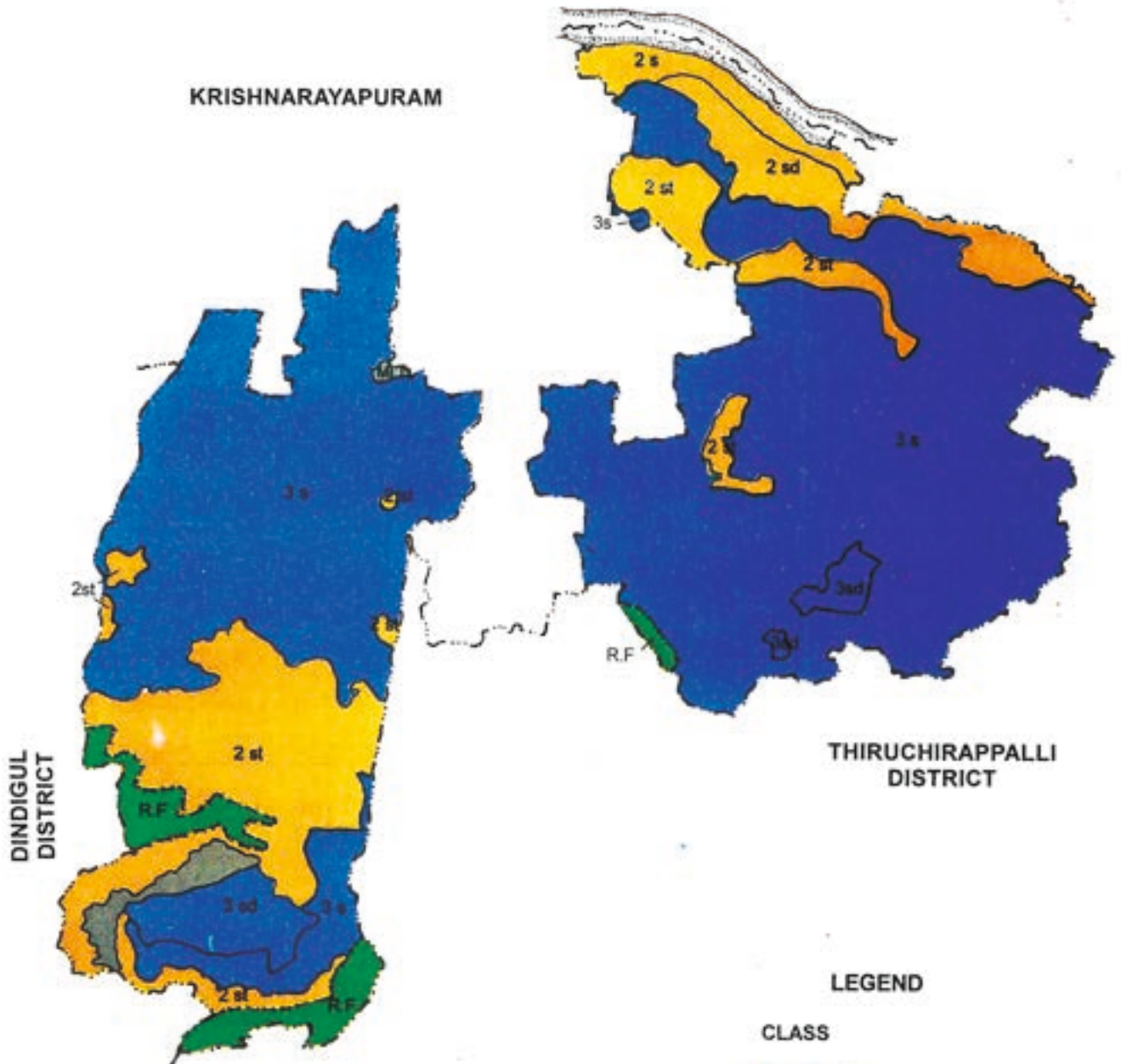
Sub class

- d** - drainage
- s** - soil
- t** - topography



LAND IRRIGABILITY

KULITHALAI TALUK



REFERENCE

- District boundary - - - - -
- Taluk boundary - - - - -
- Rivers
- Forest boundary

LEGEND

CLASS

- 2 MODERATE LIMITATION
- 3 SEVERE LIMITATION
- OTHERS

SUB CLASS

- s - SOIL LIMITATION
- t - TOPOGRAPHY LIMITATION
- d - DRAINAGE LIMITATION

SOIL PRODUCTIVITY

KULITHALAI TALUK

Sl. No.	Productivity		Soil series	Extent (ha)	Per cent to total
	Rating	Grouping			
1.	8 - 19	Poor (P)	Irugur, Irugur + Palathurai	57,919	63.09
2.	20 - 34	Average (A)	Adhanur	3,497	3.81
3.	35 - 64	Good (G)	Palathurai, Pilamedu, Kalugur and Mixed Alluvium	22,505	24.52
			Miscellaneous Land Type	1,255	1.37
			Others	896	0.98
			Forest	5,723	6.23
Total				91,795	100.00

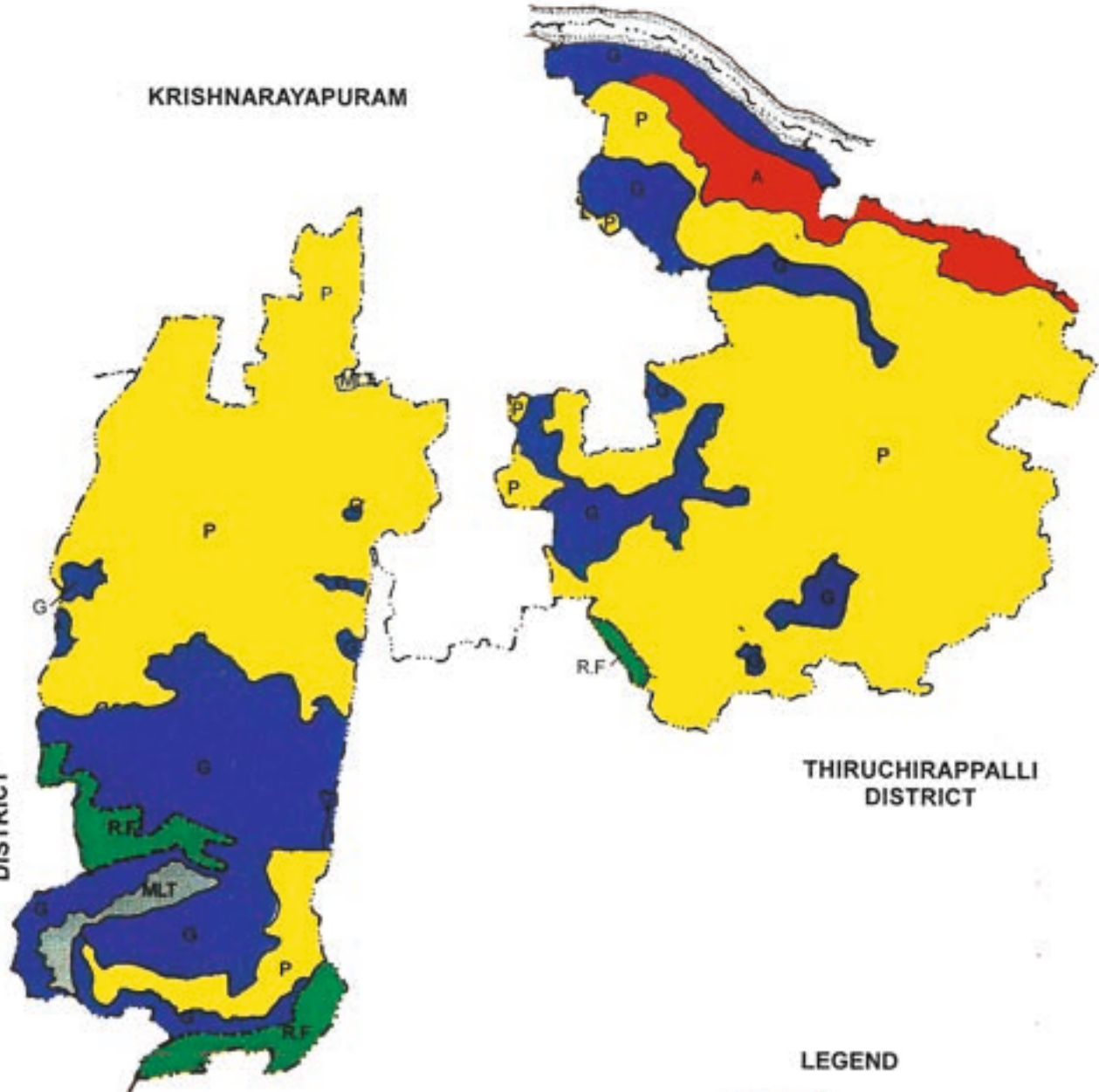
SOIL PRODUCTIVITY KULITHALAI TALUK



KRISHNARAYAPURAM

DINDIGUL
DISTRICT

THIRUCHIRAPPALLI
DISTRICT



REFERENCE

- District boundary - - - - -
- Taluk boundary - - - - -
- Rivers
- Forest boundary

LEGEND

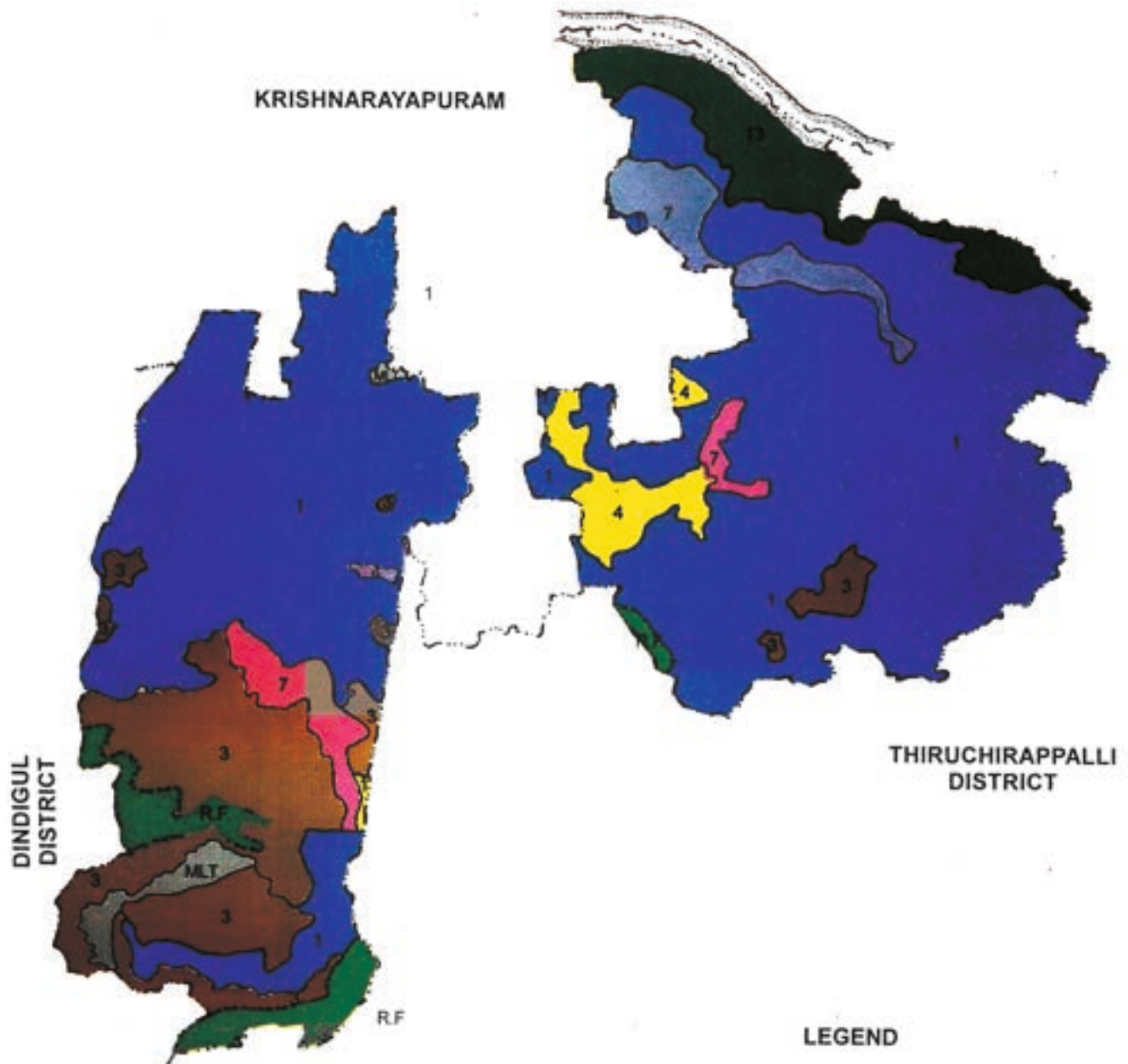
- P POOR
- A AVERAGE
- G GOOD
- MLT OTHERS

CROPS GROWN

KULITHALAI TALUK

Sl. No.	Crops grown		Map Symbol	Soil series
	Irrigated	Rainfed		
1.	Rice, Sugarcane and Banana	Millets Groundnut and Pulses	1	Irugur, Irugur + Palathurai
2.	Vegetables, Rice and Flowers	Millets and Pulses	2	Mixed Alluvium
3.	Sugarcane, Tapioca, Onion, Groundnut and Rice	Chillies, Millets Cotton, Gingelly Groundnut, Coriander and Red gram	3	Pilamedu
4.	Rice, Groundnut, Millets and Cotton	Groundnut, Millets, Gingelly and Red gram	4	Kalugur
5.	Rice, Millets Redgram, and Chillies	Pearl millet, Castor, and Gingely	7	Palathurai
6.	Rice, Banana, Sugarcane and Betelvine	Gingelly and Bhendi	13	Adhanur

CROPS GROWN KULITHALAI TALUK



REFERENCE

- District boundary - - - - -
- Taluk boundary - · - - - -
- Rivers
- Forest boundary

LEGEND

- 1
- 3
- 4
- 7
- 13
- OTHERS

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2. *Source* :
 - i) ***Soil of Thiruchirappalli district Tamilnadu***
Report No. 5 Published by SS&LUO Coimbatore
 - ii) ***Soil Brochure Thiruchirappalli district***
Compiled by staff Soil Testing Laboratory Thiruchirappalli
 - ii) ***Village level fertility status***
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